

Exhibit C

DEFENDANTS' JOINT PROPOSED CLAIM CONSTRUCTIONS AND SUPPORT

3/20/2009

Page 1 of 110

Exhibit 1 – Defendants’ Preliminary Claim Construction Chart

For U.S. Patent No. 5,715,314 (“the ‘314 Patent”), U.S. Patent No. 5,909,492 (“the ‘492 Patent”), and U.S. Patent No. 7,272,639 (“the ‘639 Patent”) (Agreed by All Defendants)¹

Claim Element(s)	Defendants’ Construction	Support for Construction
Claim 34 and Its Dependent Claims of The ‘314 Patent		
34. A network-based sales system, comprising: at least one buyer computer for operation by a user desiring to buy products; at least one shopping cart computer; and a shopping cart database connected to said shopping cart computer; said buyer computer and said shopping cart computer being interconnected by a computer network; said buyer computer being programmed to receive a plurality of requests from a user to add a plurality of respective products to a shopping cart in said shopping cart database, and, in response to said requests to add said products, to send a plurality of	a payment message - a message relating to a payment for one or more products, containing an authenticated user’s payment information and sent to the buyer computer	<p>“Whenever the present application states that one computer sends a URL to another computer, it should be understood that in preferred embodiments the URL is sent in a standard HTTP request message, unless a URL message is specified as a redirection in the present application. The request message includes components of the URL as described by the standard HTTP protocol definition. These URL components in the request message allow the server to provide a response appropriate to the URL. The term "URL" as used the present application is an example of a "link," which is a pointer to another document or form (including multimedia documents, hypertext documents including other links, or audio/video documents).” 9:51-63</p> <p>“A payment URL looks like this: http://payment.openmarket.com/pay.cgi?hash:field1=value1&field2=value 2” App. E, SOV0000149 (emphasis added).</p> <p>“Shopping Cart Mechanism how to write payment and shopping cart URLs These two types of URLs are very similar: Payment URL:</p>

¹ Nothing in this Defendants’ Preliminary Claim Construction Chart should be caused as a waiver of Defendants’ invalidity defenses under 35 U.S.C. §112. Defendants expressly preserve their rights to continue to pursue their invalidity defenses under 35 U.S.C. §112 subsequent to the Court’s Claim Construction.

3/20/2009

Page 2 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
<p>respective shopping cart messages to said shopping cart computer each of which comprises a product identifier identifying one of said plurality of products; said shopping cart computer being programmed to receive said plurality of shopping cart messages, to modify said shopping cart in said shopping cart database to reflect said plurality of requests to add said plurality of products to said shopping cart, and to cause a payment message associated with said shopping cart to be created; and</p>		<p>http://payment.openmarket.com/bin/nph-payment.cgi?TICKET Add to shopping cart URL: http://payment.openmarket.com/bin/nph-cl.cgi?CARTTICKET here's what a TICKET is: A TICKET is a signed collection of name-value pairs." App. E, SOV0000155-156, (emphasis added).</p> <p>"The user browses through the advertising document and eventually requests a product (step 32). This results in the buyer computer sending payment URL A to the payment computer (step 34). Payment URL A includes a product identifier that represents the product the user wishes to buy, a domain identifier that represents a domain of products to which the desired product belongs, a payment amount that represents the price of the product, a merchant computer identifier that represents merchant computer 14, a merchant account identifier that represents the particular merchant account to be credited with the payment amount, a duration time that represents the length of time for which access to the product is to be granted to the user after completion of the purchase transaction, an expiration time that represents a deadline beyond which this particular payment URL cannot be used, a buyer network address, and a payment URL authenticator that is a digital signature based on a cryptographic key. The payment URL authenticator is a hash of other information in the payment URL, the hash being defined by a key shared by the merchant and the operator of the payment computer.</p> <p>In an alternative embodiment, step 34 consists of the buyer computer sending a purchase product message to the merchant computer, and the merchant computer provides payment VRL A to the buyer computer in response to the purchase product message. In this alternative embodiment, payment URL A contains the same contents as above. The buyer computer then sends the payment URL A it has received from the merchant computer to the payment computer.</p> <p>When the payment computer receives the payment URL it verifies whether the payment URL authenticator was created from the contents of the payment URL using the cryptographic key (step 36). If not, the payment computer sends a</p>

3/20/2009

Page 3 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>document to the buyer computer indicating that access to the network sales system is denied (step 38). Otherwise, the payment computer determines whether the expiration time has past (step 40). If it has, the payment computer sends a document to the buyer computer indicating that the time has expired (step 41). Otherwise, the payment computer checks the buyer computer network address to see if it matches the one specified in the payment URL (step 42).” 5:27- 6:2 (emphasis added).</p> <p>“The payment computer verifies whether the shopping cart URL authenticator was created from the contents of the shopping cart URL using a cryptographic key (step 110). If not, the payment computer sends a document to the buyer computer indicating that access to the network sales system is denied (step 112). Otherwise, before any modification to a user's shopping cart is allowed, user authentication is performed (step 113) in a manner analogous to steps 40-81. Once the user is authenticated, the payment computer creates or updates a payment URL for the shopping cart (step 114).</p> <p>The user then either requests more advertisements (step 24 in FIG. 2) and possibly adds another product to the shopping cart, requests display of the shopping cart (step 116), or requests purchase of the entire contents of the shopping cart (step 124). If the user requests display of the shopping cart (step 116), the buyer computer sends a fetch shopping cart request to the payment computer (step 118), and the payment computer and buyer computer (step 119) perform steps analogous to steps 64-81. The payment computer returns the contents of the shopping cart to the buyer computer (step 120), which displays the contents of the shopping cart (step 122). If the user requests that the entire contents of the shopping cart be purchased (step 124) the buyer computer causes the payment URL for the shopping cart to be activated (step 126) and the payment URL is processed in a manner analogous to the processing of payment URLs for individual products (beginning with step 36 in FIG. 2).” 8:3-32 (emphasis added).</p>

3/20/2009

Page 4 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
<p>said buyer computer being programmed to receive a request from said user to purchase said plurality of products added to said shopping cart and to cause said payment message to be activated to initiate a payment transaction for said plurality of products added to said shopping cart;</p> <p>said shopping cart being a stored representation of a collection of products, said shopping cart database being a database of stored representations of collections of products, and said shopping cart computer being a computer that modifies said stored representations of collections of products in said database.</p>	<p>to cause said payment message to be activated -</p> <p>upon request of the authenticated user, the buyer computer causes the submission of said payment message</p>	<p>“The user then either requests more advertisements (step 24 in FIG. 2) and possibly adds another product to the shopping cart, requests display of the shopping cart (step 116), or requests purchase of the entire contents of the shopping cart (step 124). If the user requests display of the shopping cart (step 116), the buyer computer sends a fetch shopping cart request to the payment computer (step 118), and the payment computer and buyer computer (step 119) perform steps analogous to steps 64-81. The payment computer returns the contents of the shopping cart to the buyer computer (step 120), which displays the contents of the shopping cart (step 122). If the user requests that the entire contents of the shopping cart be purchased (step 124) the buyer computer causes the payment URL for the shopping cart to be activated (step 126) and the payment URL is processed in a manner analogous to the processing of payment URLs for individual products (beginning with step 36 in FIG. 2).” 8:14-32 (emphasis added).</p>
<p>35. A network-based sales system in accordance with claim 34, wherein said shopping cart computer is programmed to cause said payment message to be created</p>	<p>a payment message -</p> <p>a message relating to a payment for one or more products, containing an authenticated user's payment information and sent to the buyer computer</p>	<p>“Whenever the present application states that one computer sends a URL to another computer, it should be understood that in preferred embodiments the URL is sent in a standard HTTP request message, unless a URL message is specified as a redirection in the present application. The request message includes components of the URL as described by the standard HTTP protocol definition. These URL components in the request message allow the server to provide a response appropriate to the URL. The term "URL" as used the present</p>

3/20/2009

Page 5 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>application is an example of a "link," which is a pointer to another document or form (including multimedia documents, hypertext documents including other links, or audio/video documents)." 9:51-63</p> <p>"A payment URL looks like this: http://payment.openmarket.com/pay.cgi?hash:field1=value1&field2=value 2" App. E, SOV0000149 (emphasis added).</p> <p>"Shopping Cart Mechanism how to write payment and shopping cart URLs These two types of URLs are very similar: Payment URL: http://payment.openmarket.com/bin/nph-payment.cgi?TICKET Add to shopping cart URL: http://payment.openmarket.com/bin/nph-cl.cgi?CARTTICKET here's what a TICKET is: A TICKET is a signed collection of name-value pairs." App. E, SOV0000155-156, (emphasis added).</p> <p>"The user browses through the advertising document and eventually requests a product (step 32). This results in the buyer computer sending payment URL A to the payment computer (step 34). Payment URL A includes a product identifier that represents the product the user wishes to buy, a domain identifier that represents a domain of products to which the desired product belongs, a payment amount that represents the price of the product, a merchant computer identifier that represents merchant computer 14, a merchant account identifier that represents the particular merchant account to be credited with the payment amount, a duration time that represents the length of time for which access to the product is to be granted to the user after completion of the purchase transaction, an expiration time that represents a deadline beyond which this particular payment URL cannot be used, a buyer network address, and a payment URL authenticator that is a digital signature based on a cryptographic key. The payment URL authenticator is a hash of other information in the payment URL, the hash being defined by a key shared by the merchant and the</p>

3/20/2009

Page 6 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>operator of the payment computer.</p> <p>In an alternative embodiment, step 34 consists of the buyer computer sending a purchase product message to the merchant computer, and the merchant computer provides payment VRL A to the buyer computer in response to the purchase product message. In this alternative embodiment, payment URL A contains the same contents as above. The buyer computer then sends the payment URL A it has received from the merchant computer to the payment computer.</p> <p>When the payment computer receives the payment URL it verifies whether the payment URL authenticator was created from the contents of the payment URL using the cryptographic key (step 36). If not, the payment computer sends a document to the buyer computer indicating that access to the network sales system is denied (step 38). Otherwise, the payment computer determines whether the expiration time has past (step 40). If it has, the payment computer sends a document to the buyer computer indicating that the time has expired (step 41). Otherwise, the payment computer checks the buyer computer network address to see if it matches the one specified in the payment URL (step 42).” 5:27- 6:2 (emphasis added).</p> <p>“The payment computer verifies whether the shopping cart URL authenticator was created from the contents of the shopping cart URL using a cryptographic key (step 110). If not, the payment computer sends a document to the buyer computer indicating that access to the network sales system is denied (step 112). Otherwise, before any modification to a user's shopping cart is allowed, user authentication is performed (step 113) in a manner analogous to steps 40-81. Once the user is authenticated, the payment computer creates or updates a payment URL for the shopping cart (step 114).</p> <p>The user then either requests more advertisements (step 24 in FIG. 2) and possibly adds another product to the shopping cart, requests display of the shopping cart (step 116), or requests purchase of the entire contents of the shopping cart (step 124). If the user requests display of the shopping cart (step</p>

3/20/2009
Page 7 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		116), the buyer computer sends a fetch shopping cart request to the payment computer (step 118), and the payment computer and buyer computer (step 119) perform steps analogous to steps 64-81. The payment computer returns the contents of the shopping cart to the buyer computer (step 120), which displays the contents of the shopping cart (step 122). If the user requests that the entire contents of the shopping cart be purchased (step 124) the buyer computer causes the payment URL for the shopping cart to be activated (step 126) and the payment URL is processed in a manner analogous to the processing of payment URLs for individual products (beginning with step 36 in FIG. 2).” 8:3-32 (emphasis added).
before said buyer computer causes said payment message to be activated.	to cause said payment message to be activated - upon request of the authenticated user, the buyer computer causes the submission of said payment message	“The user then either requests more advertisements (step 24 in FIG. 2) and possibly adds another product to the shopping cart, requests display of the shopping cart (step 116), or requests purchase of the entire contents of the shopping cart (step 124). If the user requests display of the shopping cart (step 116), the buyer computer sends a fetch shopping cart request to the payment computer (step 118), and the payment computer and buyer computer (step 119) perform steps analogous to steps 64-81. The payment computer returns the contents of the shopping cart to the buyer computer (step 120), which displays the contents of the shopping cart (step 122). If the user requests that the entire contents of the shopping cart be purchased (step 124) the buyer computer causes the payment URL for the shopping cart to be activated (step 126) and the payment URL is processed in a manner analogous to the processing of payment URLs for individual products (beginning with step 36 in FIG. 2).” 8:14-32 (emphasis added).
49. A network-based sales system in accordance with claim 34, wherein the buyer computer activates the payment message by transmitting a message to the shopping cart computer that	a payment message - a message relating to a payment for one or more products, containing an authenticated user's payment information and	“Whenever the present application states that one computer sends a URL to another computer, it should be understood that in preferred embodiments the URL is sent in a standard HTTP request message, unless a URL message is specified as a redirection in the present application. The request message includes components of the URL as described by the standard HTTP protocol definition. These URL

3/20/2009

Page 8 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
causes the payment message to be activated.	sent to the buyer computer	<p>components in the request message allow the server to provide a response appropriate to the URL. The term "URL" as used the present application is an example of a "link," which is a pointer to another document or form (including multimedia documents, hypertext documents including other links, or audio/video documents)." 9:51-63</p> <p>"A payment URL looks like this: http://payment.openmarket.com/pay.cgi?hash:field1=value1&field2=value 2" App. E, SOV0000149 (emphasis added).</p> <p>"Shopping Cart Mechanism how to write payment and shopping cart URLs These two types of URLs are very similar: Payment URL: http://payment.openmarket.com/bin/nph-payment.cgi?TICKET Add to shopping cart URL: http://payment.openmarket.com/bin/nph-cl.cgi?CARTTICKET here's what a TICKET is: A TICKET is a signed collection of name-value pairs." App. E, SOV0000155-156, (emphasis added).</p> <p>"The user browses through the advertising document and eventually requests a product (step 32). This results in the buyer computer sending payment URL A to the payment computer (step 34). Payment URL A includes a product identifier that represents the product the user wishes to buy, a domain identifier that represents a domain of products to which the desired product belongs, a payment amount that represents the price of the product, a merchant computer identifier that represents merchant computer 14, a merchant account identifier that represents the particular merchant account to be credited with the payment amount, a duration time that represents the length of time for which access to the product is to be granted to the user after completion of the purchase transaction, an expiration time that represents a deadline beyond which this particular payment URL cannot be used, a buyer network address, and a payment URL authenticator that is a digital signature based on a cryptographic key. The payment URL authenticator is a hash of other information in the</p>

3/20/2009

Page 9 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>payment URL, the hash being defined by a key shared by the merchant and the operator of the payment computer.</p> <p>In an alternative embodiment, step 34 consists of the buyer computer sending a purchase product message to the merchant computer, and the merchant computer provides payment VRL A to the buyer computer in response to the purchase product message. In this alternative embodiment, payment URL A contains the same contents as above. The buyer computer then sends the payment URL A it has received from the merchant computer to the payment computer.</p> <p>When the payment computer receives the payment URL it verifies whether the payment URL authenticator was created from the contents of the payment URL using the cryptographic key (step 36). If not, the payment computer sends a document to the buyer computer indicating that access to the network sales system is denied (step 38). Otherwise, the payment computer determines whether the expiration time has past (step 40). If it has, the payment computer sends a document to the buyer computer indicating that the time has expired (step 41). Otherwise, the payment computer checks the buyer computer network address to see if it matches the one specified in the payment URL (step 42).” 5:27- 6:2 (emphasis added).</p> <p>“The payment computer verifies whether the shopping cart URL authenticator was created from the contents of the shopping cart URL using a cryptographic key (step 110). If not, the payment computer sends a document to the buyer computer indicating that access to the network sales system is denied (step 112). Otherwise, before any modification to a user's shopping cart is allowed, user authentication is performed (step 113) in a manner analogous to steps 40-81. Once the user is authenticated, the payment computer creates or updates a payment URL for the shopping cart (step 114).</p> <p>The user then either requests more advertisements (step 24 in FIG. 2) and possibly adds another product to the shopping cart, requests display of the shopping cart (step 116), or requests purchase of the entire contents of the</p>

3/20/2009

Page 10 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		shopping cart (step 124). If the user requests display of the shopping cart (step 116), the buyer computer sends a fetch shopping cart request to the payment computer (step 118), and the payment computer and buyer computer (step 119) perform steps analogous to steps 64-81. The payment computer returns the contents of the shopping cart to the buyer computer (step 120), which displays the contents of the shopping cart (step 122). If the user requests that the entire contents of the shopping cart be purchased (step 124) the buyer computer causes the payment URL for the shopping cart to be activated (step 126) and the payment URL is processed in a manner analogous to the processing of payment URLs for individual products (beginning with step 36 in FIG. 2).” 8:3-32 (emphasis added).
60. A network-based sales system in accordance with claim 34, wherein at least one of the requests comprises a shopping cart URL .	a shopping cart URL - a standard HTTP request message send by the buyer computer to the shopping cart computer which causes the shopping cart computer to modify content of a shopping cart and includes URL with a product identifier, a domain identifier, a payment amount, a merchant computer identifier, a merchant account identifier, a duration time, an expiration time, and a shopping cart URL authenticator.	“Whenever the present application states that one computer sends a URL to another computer, it should be understood that in preferred embodiments the URL is sent in a standard HTTP request message, unless a URL message is specified as a redirection in the present application . The request message includes components of the URL as described by the standard HTTP protocol definition. These URL components in the request message allow the server to provide a response appropriate to the URL. The term "URL" as used the present application is an example of a "link," which is a pointer to another document or form (including multimedia documents, hypertext documents including other links, or audio/video documents).” 9:51-63 “With reference now to FIG. 3, when the merchant computer sends the advertising document to the buyer computer, the user may request that a product be added to a shopping cart in the shopping cart database rather than request that the product be purchased immediately. The buyer computer sends a shopping cart URL to the payment computer (step 108), the shopping cart URL including a product identifier, a domain identifier, a payment amount, a merchant computer identifier, a merchant account identifier, a duration time, an

3/20/2009

Page 11 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>expiration time, and a shopping cart URL authenticator that is a digital signature based on a cryptographic key. The shopping cart URL authenticator is a hash of other information in the shopping cart URL, the hash being defined by a key shared by the merchant and the operator of the payment computer.</p> <p>The payment computer verifies whether the shopping cart URL authenticator was created from the contents of the shopping cart URL using a cryptographic key (step 110). If not, the payment computer sends a document to the buyer computer indicating that access to the network sales system is denied (step 112). Otherwise, before any modification to a user's shopping cart is allowed, user authentication is performed (step 113) in a manner analogous to steps 40-81. Once the user is authenticated, the payment computer creates or updates a payment URL for the shopping cart (step 114).</p> <p>The user then either requests more advertisements (step 24 in FIG. 2) and possibly adds another product to the shopping cart, requests display of the shopping cart (step 116), or requests purchase of the entire contents of the shopping cart (step 124). If the user requests display of the shopping cart (step 116), the buyer computer sends a fetch shopping cart request to the payment computer (step 118), and the payment computer and buyer computer (step 119) perform steps analogous to steps 64-81.” 7:51-8:23 (emphasis added).</p> <p>“Shopping Cart Mechanism how to write payment and shopping cart URLs These two types of URLs are very similar: Payment URL: http://payment.openmarket.com/bin/nph-payment.cgi?TICKET Add to shopping cart URL: http://payment.openmarket.com/bin/nph-cl.cgi?CARTTICKET here's what a TICKET is: A TICKET is a signed collection of name-value pairs. ... A CARTTICKET is the same as a TICKET except that it may also contain a 'details=DETAILS' field. A DETAILS is an escaped name/value string constructed by calling url_unparse ARRAY where url_unparse is defined</p>

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>in /omi/httpd/payment/root/lib/ticket.tcl and ARRAY is a tcl array with items in it: set a (size) XL set a (color) blue url_unparse a</p> <p>This returns things like: color=blue&size=XL The details item is just carried along through the shopping cart and [eventually] entered into the order that goes to the merchant's order entry system." App. E, SOV0000155-156, (emphasis added).</p>
<p>65. A network-based sales system in accordance with claim 60, wherein the shopping cart URL comprises a product identifier.</p>	<p>a shopping cart URL -</p> <p>a standard HTTP request message send by the buyer computer to the shopping cart computer which causes the shopping cart computer to modify content of a shopping cart and includes URL with a product identifier, a domain identifier, a payment amount, a merchant computer identifier, a merchant account identifier, a duration time, an expiration time, and a shopping cart URL authenticator.</p>	<p>"Whenever the present application states that one computer sends a URL to another computer, it should be understood that in preferred embodiments the URL is sent in a standard HTTP request message, unless a URL message is specified as a redirection in the present application. The request message includes components of the URL as described by the standard HTTP protocol definition. These URL components in the request message allow the server to provide a response appropriate to the URL. The term "URL" as used the present application is an example of a "link," which is a pointer to another document or form (including multimedia documents, hypertext documents including other links, or audio/video documents)." 9:51-63</p> <p>"With reference now to FIG. 3, when the merchant computer sends the advertising document to the buyer computer, the user may request that a product be added to a shopping cart in the shopping cart database rather than request that the product be purchased immediately. The buyer computer sends a shopping cart URL to the payment computer (step 108), the shopping cart URL including a product identifier, a domain identifier, a payment amount, a merchant computer identifier, a merchant account identifier, a duration time, an expiration time, and a shopping cart URL authenticator that is a digital</p>

3/20/2009

Page 13 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>signature based on a cryptographic key. The shopping cart URL authenticator is a hash of other information in the shopping cart URL, the hash being defined by a key shared by the merchant and the operator of the payment computer.</p> <p>The payment computer verifies whether the shopping cart URL authenticator was created from the contents of the shopping cart URL using a cryptographic key (step 110). If not, the payment computer sends a document to the buyer computer indicating that access to the network sales system is denied (step 112). Otherwise, before any modification to a user's shopping cart is allowed, user authentication is performed (step 113) in a manner analogous to steps 40-81. Once the user is authenticated, the payment computer creates or updates a payment URL for the shopping cart (step 114).</p> <p>The user then either requests more advertisements (step 24 in FIG. 2) and possibly adds another product to the shopping cart, requests display of the shopping cart (step 116), or requests purchase of the entire contents of the shopping cart (step 124). If the user requests display of the shopping cart (step 116), the buyer computer sends a fetch shopping cart request to the payment computer (step 118), and the payment computer and buyer computer (step 119) perform steps analogous to steps 64-81.” 7:51-8:23 (emphasis added).</p> <p>“Shopping Cart Mechanism how to write payment and shopping cart URLs These two types of URLs are very similar: Payment URL: http://payment.openmarket.com/bin/nph-payment.cgi?TICKET Add to shopping cart URL: http://payment.openmarket.com/bin/nph-cl.cgi?CARTTICKET here's what a TICKET is: A TICKET is a signed collection of name-value pairs. ... A CARTTICKET is the same as a TICKET except that it may also contain a 'details=DETAILS' field. A DETAILS is an escaped name/value string constructed by calling url_unparse ARRAY where url_unparse is defined in /omi/httpd/payment/root/lib/ticket.tcl and ARRAY is a tcl array with items in</p>

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>it: set a (size) XL set a (color) blue url_unparse a</p> <p>This returns things like: color=blue&size=XL The details item is just carried along through the shopping cart and [eventually] entered into the order that goes to the merchant's order entry system." App. E, SOV0000155-156, (emphasis added).</p>
<p>74. A network-based sales system in accordance with claim 34, wherein the buyer computer activates the payment message by transmitting a message to the shopping cart computer that causes the payment message to be activated; wherein the shopping cart computer transmits a payment confirmation document to the buyer computer.</p>	<p>a payment message - a message relating to a payment for one or more products, containing an authenticated user's payment information and sent to the buyer computer</p>	<p>"Whenever the present application states that one computer sends a URL to another computer, it should be understood that in preferred embodiments the URL is sent in a standard HTTP request message, unless a URL message is specified as a redirection in the present application. The request message includes components of the URL as described by the standard HTTP protocol definition. These URL components in the request message allow the server to provide a response appropriate to the URL. The term "URL" as used the present application is an example of a "link," which is a pointer to another document or form (including multimedia documents, hypertext documents including other links, or audio/video documents)." 9:51-63</p> <p>"A payment URL looks like this: http://payment.openmarket.com/pay.cgi?hash:field1=value1&field2=value 2" App. E, SOV0000149 (emphasis added).</p> <p>"Shopping Cart Mechanism how to write payment and shopping cart URLs These two types of URLs are very similar: Payment URL: http://payment.openmarket.com/bin/nph-payment.cgi?TICKET</p>

3/20/2009

Page 15 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>Add to shopping cart URL: http://payment.openmarket.com/bin/nph-c1.cgi?CARTTICKET here's what a TICKET is: A TICKET is a signed collection of name-value pairs." App. E, SOV0000155-156, (emphasis added).</p> <p>"The user browses through the advertising document and eventually requests a product (step 32). This results in the buyer computer sending payment URL A to the payment computer (step 34). Payment URL A includes a product identifier that represents the product the user wishes to buy, a domain identifier that represents a domain of products to which the desired product belongs, a payment amount that represents the price of the product, a merchant computer identifier that represents merchant computer 14, a merchant account identifier that represents the particular merchant account to be credited with the payment amount, a duration time that represents the length of time for which access to the product is to be granted to the user after completion of the purchase transaction, an expiration time that represents a deadline beyond which this particular payment URL cannot be used, a buyer network address, and a payment URL authenticator that is a digital signature based on a cryptographic key. The payment URL authenticator is a hash of other information in the payment URL, the hash being defined by a key shared by the merchant and the operator of the payment computer.</p> <p>In an alternative embodiment, step 34 consists of the buyer computer sending a purchase product message to the merchant computer, and the merchant computer provides payment VRL A to the buyer computer in response to the purchase product message. In this alternative embodiment, payment URL A contains the same contents as above. The buyer computer then sends the payment URL A it has received from the merchant computer to the payment computer.</p> <p>When the payment computer receives the payment URL it verifies whether the payment URL authenticator was created from the contents of the payment URL using the cryptographic key (step 36). If not, the payment computer sends a document to the buyer computer indicating that access to the network sales</p>

3/20/2009

Page 16 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>system is denied (step 38). Otherwise, the payment computer determines whether the expiration time has past (step 40). If it has, the payment computer sends a document to the buyer computer indicating that the time has expired (step 41). Otherwise, the payment computer checks the buyer computer network address to see if it matches the one specified in the payment URL (step 42).” 5:27- 6:2 (emphasis added).</p> <p>“The payment computer verifies whether the shopping cart URL authenticator was created from the contents of the shopping cart URL using a cryptographic key (step 110). If not, the payment computer sends a document to the buyer computer indicating that access to the network sales system is denied (step 112). Otherwise, before any modification to a user's shopping cart is allowed, user authentication is performed (step 113) in a manner analogous to steps 40-81. Once the user is authenticated, the payment computer creates or updates a payment URL for the shopping cart (step 114).</p> <p>The user then either requests more advertisements (step 24 in FIG. 2) and possibly adds another product to the shopping cart, requests display of the shopping cart (step 116), or requests purchase of the entire contents of the shopping cart (step 124). If the user requests display of the shopping cart (step 116), the buyer computer sends a fetch shopping cart request to the payment computer (step 118), and the payment computer and buyer computer (step 119) perform steps analogous to steps 64-81. The payment computer returns the contents of the shopping cart to the buyer computer (step 120), which displays the contents of the shopping cart (step 122). If the user requests that the entire contents of the shopping cart be purchased (step 124) the buyer computer causes the payment URL for the shopping cart to be activated (step 126) and the payment URL is processed in a manner analogous to the processing of payment URLs for individual products (beginning with step 36 in FIG. 2).” 8:3-32 (emphasis added).</p>
Claim 39 and Its Dependent Claims of The '314 Patent		

Claim Element(s)	Defendants' Construction	Support for Construction
<p>39. A method of operating a shopping cart computer in a computer network comprising at least one buyer computer for operation by a user desiring to buy products, at least one shopping cart computer, and a shopping cart database connected to said shopping cart computer, said method comprising the steps of: receiving, at said shopping cart computer, a plurality of shopping cart messages sent to said shopping cart computer by said buyer computer in response to receipt of a plurality of requests from a user to add a plurality of respective products to a shopping cart in said shopping cart database, each of said shopping cart messages comprising a product identifier identifying one of said plurality of products; modifying said shopping cart in said shopping cart database to reflect said</p>	<p>a payment message - a message relating to a payment for one or more products, containing an authenticated user's payment information and sent to the buyer computer</p>	<p>“Whenever the present application states that one computer sends a URL to another computer, it should be understood that in preferred embodiments the URL is sent in a standard HTTP request message, unless a URL message is specified as a redirection in the present application. The request message includes components of the URL as described by the standard HTTP protocol definition. These URL components in the request message allow the server to provide a response appropriate to the URL. The term "URL" as used the present application is an example of a "link," which is a pointer to another document or form (including multimedia documents, hypertext documents including other links, or audio/video documents).” 9:51-63</p> <p>“A payment URL looks like this: http://payment.openmarket.com/pay.cgi?hash:field1=value1&field2=value2” App. E, SOV0000149 (emphasis added).</p> <p>“Shopping Cart Mechanism how to write payment and shopping cart URLs These two types of URLs are very similar: Payment URL: http://payment.openmarket.com/bin/nph-payment.cgi?TICKET Add to shopping cart URL: http://payment.openmarket.com/bin/nph-cl.cgi?CARTTICKET here's what a TICKET is: A TICKET is a signed collection of name-value pairs.” App. E, SOV0000155-156, (emphasis added).</p> <p>“The user browses through the advertising document and eventually requests a product (step 32). This results in the buyer computer sending payment URL A to the payment computer (step 34). Payment URL A includes a product identifier that represents the product the user wishes to buy, a domain identifier that represents a domain of products to which the desired product belongs, a payment amount that represents the price of the product, a merchant computer</p>

3/20/2009

Page 18 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
<p>plurality of requests to add said plurality of products to said shopping cart; and</p> <p>causing a payment message associated with said shopping cart to be created;</p>		<p>identifier that represents merchant computer 14, a merchant account identifier that represents the particular merchant account to be credited with the payment amount, a duration time that represents the length of time for which access to the product is to be granted to the user after completion of the purchase transaction, an expiration time that represents a deadline beyond which this particular payment URL cannot be used, a buyer network address, and a payment URL authenticator that is a digital signature based on a cryptographic key. The payment URL authenticator is a hash of other information in the payment URL, the hash being defined by a key shared by the merchant and the operator of the payment computer.</p> <p>In an alternative embodiment, step 34 consists of the buyer computer sending a purchase product message to the merchant computer, and the merchant computer provides payment VRL A to the buyer computer in response to the purchase product message. In this alternative embodiment, payment URL A contains the same contents as above. The buyer computer then sends the payment URL A it has received from the merchant computer to the payment computer.</p> <p>When the payment computer receives the payment URL it verifies whether the payment URL authenticator was created from the contents of the payment URL using the cryptographic key (step 36). If not, the payment computer sends a document to the buyer computer indicating that access to the network sales system is denied (step 38). Otherwise, the payment computer determines whether the expiration time has past (step 40). If it has, the payment computer sends a document to the buyer computer indicating that the time has expired (step 41). Otherwise, the payment computer checks the buyer computer network address to see if it matches the one specified in the payment URL (step 42).” 5:27- 6:2 (emphasis added).</p> <p>“The payment computer verifies whether the shopping cart URL authenticator was created from the contents of the shopping cart URL using a cryptographic key (step 110). If not, the payment computer sends a document to the buyer computer indicating that access to the network sales system is denied (step</p>

3/20/2009

Page 19 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>112). Otherwise, before any modification to a user's shopping cart is allowed, user authentication is performed (step 113) in a manner analogous to steps 40-81. Once the user is authenticated, the payment computer creates or updates a payment URL for the shopping cart (step 114).</p> <p>The user then either requests more advertisements (step 24 in FIG. 2) and possibly adds another product to the shopping cart, requests display of the shopping cart (step 116), or requests purchase of the entire contents of the shopping cart (step 124). If the user requests display of the shopping cart (step 116), the buyer computer sends a fetch shopping cart request to the payment computer (step 118), and the payment computer and buyer computer (step 119) perform steps analogous to steps 64-81. The payment computer returns the contents of the shopping cart to the buyer computer (step 120), which displays the contents of the shopping cart (step 122). If the user requests that the entire contents of the shopping cart be purchased (step 124) the buyer computer causes the payment URL for the shopping cart to be activated (step 126) and the payment URL is processed in a manner analogous to the processing of payment URLs for individual products (beginning with step 36 in FIG. 2).” 8:3-32 (emphasis added).</p>
<p>said buyer computer being programmed to receive a request from said user to purchase said plurality of products added to said shopping cart and to cause said payment message to be activated to initiate a payment transaction for said plurality of products added to said shopping cart;</p>	<p>to cause said payment message to be activated -</p> <p>upon request of the authenticated user, the buyer computer causes the submission of said payment message</p>	<p>“The user then either requests more advertisements (step 24 in FIG. 2) and possibly adds another product to the shopping cart, requests display of the shopping cart (step 116), or requests purchase of the entire contents of the shopping cart (step 124). If the user requests display of the shopping cart (step 116), the buyer computer sends a fetch shopping cart request to the payment computer (step 118), and the payment computer and buyer computer (step 119) perform steps analogous to steps 64-81. The payment computer returns the contents of the shopping cart to the buyer computer (step 120), which displays the contents of the shopping cart (step 122). If the user requests that the entire contents of the shopping cart be purchased (step 124) the buyer computer causes the payment URL for the shopping cart to be activated (step 126) and the payment URL is processed in a manner analogous to the processing of payment URLs for individual products (beginning with step 36 in FIG. 2).”</p>

Claim Element(s)	Defendants' Construction	Support for Construction
<p>said shopping cart being a stored representation of a collection of products, said shopping cart database being a database of stored representations of collections of products, and said shopping cart computer being a computer that modifies said stored representations of collections of products in said database.</p>		<p>8:14-32 (emphasis added).</p>
<p>109. The method of claim 39, wherein the buyer computer activates the payment message by transmitting a message to the shopping cart computer that causes the payment message to be activated.</p>	<p>a payment message - a message relating to a payment for one or more products, containing an authenticated user's payment information and sent to the buyer computer</p>	<p>"Whenever the present application states that one computer sends a URL to another computer, it should be understood that in preferred embodiments the URL is sent in a standard HTTP request message, unless a URL message is specified as a redirection in the present application. The request message includes components of the URL as described by the standard HTTP protocol definition. These URL components in the request message allow the server to provide a response appropriate to the URL. The term "URL" as used the present application is an example of a "link," which is a pointer to another document or form (including multimedia documents, hypertext documents including other links, or audio/video documents)." 9:51-63</p> <p>"A payment URL looks like this: http://payment.openmarket.com/pay.cgi?hash:field1=value1&field2=value 2" App. E, SOV0000149 (emphasis added).</p> <p>"Shopping Cart Mechanism</p>

3/20/2009

Page 21 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>how to write payment and shopping cart URLs These two types of URLs are very similar: Payment URL: http://payment.openmarket.com/bin/nph-payment.cgi?TICKET Add to shopping cart URL: http://payment.openmarket.com/bin/nph-cl.cgi?CARTTICKET here's what a TICKET is: A TICKET is a signed collection of name-value pairs." App. E, SOV0000155-156, (emphasis added).</p> <p>"The user browses through the advertising document and eventually requests a product (step 32). This results in the buyer computer sending payment URL A to the payment computer (step 34). Payment URL A includes a product identifier that represents the product the user wishes to buy, a domain identifier that represents a domain of products to which the desired product belongs, a payment amount that represents the price of the product, a merchant computer identifier that represents merchant computer 14, a merchant account identifier that represents the particular merchant account to be credited with the payment amount, a duration time that represents the length of time for which access to the product is to be granted to the user after completion of the purchase transaction, an expiration time that represents a deadline beyond which this particular payment URL cannot be used, a buyer network address, and a payment URL authenticator that is a digital signature based on a cryptographic key. The payment URL authenticator is a hash of other information in the payment URL, the hash being defined by a key shared by the merchant and the operator of the payment computer.</p> <p>In an alternative embodiment, step 34 consists of the buyer computer sending a purchase product message to the merchant computer, and the merchant computer provides payment VRL A to the buyer computer in response to the purchase product message. In this alternative embodiment, payment URL A contains the same contents as above. The buyer computer then sends the payment URL A it has received from the merchant computer to the payment computer.</p>

3/20/2009

Page 22 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>When the payment computer receives the payment URL it verifies whether the payment URL authenticator was created from the contents of the payment URL using the cryptographic key (step 36). If not, the payment computer sends a document to the buyer computer indicating that access to the network sales system is denied (step 38). Otherwise, the payment computer determines whether the expiration time has past (step 40). If it has, the payment computer sends a document to the buyer computer indicating that the time has expired (step 41). Otherwise, the payment computer checks the buyer computer network address to see if it matches the one specified in the payment URL (step 42).” 5:27- 6:2 (emphasis added).</p> <p>“The payment computer verifies whether the shopping cart URL authenticator was created from the contents of the shopping cart URL using a cryptographic key (step 110). If not, the payment computer sends a document to the buyer computer indicating that access to the network sales system is denied (step 112). Otherwise, before any modification to a user's shopping cart is allowed, user authentication is performed (step 113) in a manner analogous to steps 40-81. Once the user is authenticated, the payment computer creates or updates a payment URL for the shopping cart (step 114).</p> <p>The user then either requests more advertisements (step 24 in FIG. 2) and possibly adds another product to the shopping cart, requests display of the shopping cart (step 116), or requests purchase of the entire contents of the shopping cart (step 124). If the user requests display of the shopping cart (step 116), the buyer computer sends a fetch shopping cart request to the payment computer (step 118), and the payment computer and buyer computer (step 119) perform steps analogous to steps 64-81. The payment computer returns the contents of the shopping cart to the buyer computer (step 120), which displays the contents of the shopping cart (step 122). If the user requests that the entire contents of the shopping cart be purchased (step 124) the buyer computer causes the payment URL for the shopping cart to be activated (step 126) and the payment URL is processed in a manner analogous to the processing of payment URLs for individual products (beginning with step 36 in FIG. 2).”</p>

Claim Element(s)	Defendants' Construction	Support for Construction
		8:3-32 (emphasis added).
120. The method of claim 39, wherein at least one of the requests comprises a shopping cart URL .	<p>a shopping cart URL -</p> <p>a standard HTTP request message send by the buyer computer to the shopping cart computer which causes the shopping cart computer to modify content of a shopping cart and includes URL with a product identifier, a domain identifier, a payment amount, a merchant computer identifier, a merchant account identifier, a duration time, an expiration time, and a shopping cart URL authenticator.</p>	<p>“Whenever the present application states that one computer sends a URL to another computer, it should be understood that in preferred embodiments the URL is sent in a standard HTTP request message, unless a URL message is specified as a redirection in the present application. The request message includes components of the URL as described by the standard HTTP protocol definition. These URL components in the request message allow the server to provide a response appropriate to the URL. The term "URL" as used the present application is an example of a "link," which is a pointer to another document or form (including multimedia documents, hypertext documents including other links, or audio/video documents).” 9:51-63</p> <p>“With reference now to FIG. 3, when the merchant computer sends the advertising document to the buyer computer, the user may request that a product be added to a shopping cart in the shopping cart database rather than request that the product be purchased immediately. The buyer computer sends a shopping cart URL to the payment computer (step 108), the shopping cart URL including a product identifier, a domain identifier, a payment amount, a merchant computer identifier, a merchant account identifier, a duration time, an expiration time, and a shopping cart URL authenticator that is a digital signature based on a cryptographic key. The shopping cart URL authenticator is a hash of other information in the shopping cart URL, the hash being defined by a key shared by the merchant and the operator of the payment computer.</p> <p>The payment computer verifies whether the shopping cart URL authenticator was created from the contents of the shopping cart URL using a cryptographic key (step 110). If not, the payment computer sends a document to the buyer computer indicating that access to the network sales system is denied (step</p>

3/20/2009

Page 24 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>112). Otherwise, before any modification to a user's shopping cart is allowed, user authentication is performed (step 113) in a manner analogous to steps 40-81. Once the user is authenticated, the payment computer creates or updates a payment URL for the shopping cart (step 114).</p> <p>The user then either requests more advertisements (step 24 in FIG. 2) and possibly adds another product to the shopping cart, requests display of the shopping cart (step 116), or requests purchase of the entire contents of the shopping cart (step 124). If the user requests display of the shopping cart (step 116), the buyer computer sends a fetch shopping cart request to the payment computer (step 118), and the payment computer and buyer computer (step 119) perform steps analogous to steps 64-81.” 7:51-8:23 (emphasis added).</p> <p>“Shopping Cart Mechanism how to write payment and shopping cart URLs These two types of URLs are very similar: Payment URL: http://payment.openmarket.com/bin/nph-payment.cgi?TICKET Add to shopping cart URL: http://payment.openmarket.com/bin/nph-cl.cgi?CARTTICKET here's what a TICKET is: A TICKET is a signed collection of name-value pairs. ... A CARTTICKET is the same as a TICKET except that it may also contain a 'details=DETAILS' field. A DETAILS is an escaped name/value string constructed by calling url_unparse ARRAY where url_unparse is defined in /omi/httpd/payment/root/lib/ticket.tcl and ARRAY is a tcl array with items in it: set a (size) XL set a (color) blue url_unparse a</p> <p>This returns things like: color=blue&size=XL The details item is just carried along through the shopping cart and [eventually] entered into the order that goes to the merchant's order entry system.” App. E,</p>

Claim Element(s)	Defendants' Construction	Support for Construction
		SOV0000155-156, (emphasis added).
125. The method of claim 120, wherein the shopping cart URL comprises a product identifier.	<p>a shopping cart URL -</p> <p>a standard HTTP request message send by the buyer computer to the shopping cart computer which causes the shopping cart computer to modify content of a shopping cart and includes URL with a product identifier, a domain identifier, a payment amount, a merchant computer identifier, a merchant account identifier, a duration time, an expiration time, and a shopping cart URL authenticator.</p>	<p>“Whenever the present application states that one computer sends a URL to another computer, it should be understood that in preferred embodiments the URL is sent in a standard HTTP request message, unless a URL message is specified as a redirection in the present application. The request message includes components of the URL as described by the standard HTTP protocol definition. These URL components in the request message allow the server to provide a response appropriate to the URL. The term "URL" as used the present application is an example of a "link," which is a pointer to another document or form (including multimedia documents, hypertext documents including other links, or audio/video documents).” 9:51-63</p> <p>“With reference now to FIG. 3, when the merchant computer sends the advertising document to the buyer computer, the user may request that a product be added to a shopping cart in the shopping cart database rather than request that the product be purchased immediately. The buyer computer sends a shopping cart URL to the payment computer (step 108), the shopping cart URL including a product identifier, a domain identifier, a payment amount, a merchant computer identifier, a merchant account identifier, a duration time, an expiration time, and a shopping cart URL authenticator that is a digital signature based on a cryptographic key. The shopping cart URL authenticator is a hash of other information in the shopping cart URL, the hash being defined by a key shared by the merchant and the operator of the payment computer.</p> <p>The payment computer verifies whether the shopping cart URL authenticator was created from the contents of the shopping cart URL using a cryptographic key (step 110). If not, the payment computer sends a document to the buyer computer indicating that access to the network sales system is denied (step</p>

3/20/2009

Page 26 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>112). Otherwise, before any modification to a user's shopping cart is allowed, user authentication is performed (step 113) in a manner analogous to steps 40-81. Once the user is authenticated, the payment computer creates or updates a payment URL for the shopping cart (step 114).</p> <p>The user then either requests more advertisements (step 24 in FIG. 2) and possibly adds another product to the shopping cart, requests display of the shopping cart (step 116), or requests purchase of the entire contents of the shopping cart (step 124). If the user requests display of the shopping cart (step 116), the buyer computer sends a fetch shopping cart request to the payment computer (step 118), and the payment computer and buyer computer (step 119) perform steps analogous to steps 64-81.” 7:51-8:23 (emphasis added).</p> <p>“Shopping Cart Mechanism how to write payment and shopping cart URLs These two types of URLs are very similar: Payment URL: http://payment.openmarket.com/bin/nph-payment.cgi?TICKET Add to shopping cart URL: http://payment.openmarket.com/bin/nph-cl.cgi?CARTTICKET here's what a TICKET is: A TICKET is a signed collection of name-value pairs. ... A CARTTICKET is the same as a TICKET except that it may also contain a 'details=DETAILS' field. A DETAILS is an escaped name/value string constructed by calling url_unparse ARRAY where url_unparse is defined in /omi/httpd/payment/root/lib/ticket.tcl and ARRAY is a tcl array with items in it: set a (size) XL set a (color) blue url_unparse a</p> <p>This returns things like: color=blue&size=XL The details item is just carried along through the shopping cart and [eventually] entered into the order that goes to the merchant's order entry system.” App. E,</p>

Claim Element(s)	Defendants' Construction	Support for Construction
		SOV0000155-156, (emphasis added).
134. The method of claim 39, wherein the buyer computer activates the payment message by transmitting a message to the shopping cart computer that causes the payment message to be activated; wherein the shopping cart computer transmits a payment confirmation document to the buyer computer.	a payment message - a message relating to a payment for one or more products, containing an authenticated user's payment information and sent to the buyer computer	<p>"Whenever the present application states that one computer sends a URL to another computer, it should be understood that in preferred embodiments the URL is sent in a standard HTTP request message, unless a URL message is specified as a redirection in the present application. The request message includes components of the URL as described by the standard HTTP protocol definition. These URL components in the request message allow the server to provide a response appropriate to the URL. The term "URL" as used the present application is an example of a "link," which is a pointer to another document or form (including multimedia documents, hypertext documents including other links, or audio/video documents)." 9:51-63</p> <p>"A payment URL looks like this: http://payment.openmarket.com/pay.cgi?hash:field1=value1&field2=value 2" App. E, SOV0000149 (emphasis added).</p> <p>"Shopping Cart Mechanism how to write payment and shopping cart URLs These two types of URLs are very similar: Payment URL: http://payment.openmarket.com/bin/nph-payment.cgi?TICKET Add to shopping cart URL: http://payment.openmarket.com/bin/nph-cl.cgi?CARTTICKET here's what a TICKET is: A TICKET is a signed collection of name-value pairs." App. E, SOV0000155-156, (emphasis added).</p> <p>"The user browses through the advertising document and eventually requests a product (step 32). This results in the buyer computer sending payment URL A to the payment computer (step 34). Payment URL A includes a product</p>

3/20/2009

Page 28 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>identifier that represents the product the user wishes to buy, a domain identifier that represents a domain of products to which the desired product belongs, a payment amount that represents the price of the product, a merchant computer identifier that represents merchant computer 14, a merchant account identifier that represents the particular merchant account to be credited with the payment amount, a duration time that represents the length of time for which access to the product is to be granted to the user after completion of the purchase transaction, an expiration time that represents a deadline beyond which this particular payment URL cannot be used, a buyer network address, and a payment URL authenticator that is a digital signature based on a cryptographic key. The payment URL authenticator is a hash of other information in the payment URL, the hash being defined by a key shared by the merchant and the operator of the payment computer.</p> <p>In an alternative embodiment, step 34 consists of the buyer computer sending a purchase product message to the merchant computer, and the merchant computer provides payment VRL A to the buyer computer in response to the purchase product message. In this alternative embodiment, payment URL A contains the same contents as above. The buyer computer then sends the payment URL A it has received from the merchant computer to the payment computer.</p> <p>When the payment computer receives the payment URL it verifies whether the payment URL authenticator was created from the contents of the payment URL using the cryptographic key (step 36). If not, the payment computer sends a document to the buyer computer indicating that access to the network sales system is denied (step 38). Otherwise, the payment computer determines whether the expiration time has past (step 40). If it has, the payment computer sends a document to the buyer computer indicating that the time has expired (step 41). Otherwise, the payment computer checks the buyer computer network address to see if it matches the one specified in the payment URL (step 42).” 5:27- 6:2 (emphasis added).</p> <p>“The payment computer verifies whether the shopping cart URL authenticator</p>

3/20/2009

Page 29 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>was created from the contents of the shopping cart URL using a cryptographic key (step 110). If not, the payment computer sends a document to the buyer computer indicating that access to the network sales system is denied (step 112). Otherwise, before any modification to a user's shopping cart is allowed, user authentication is performed (step 113) in a manner analogous to steps 40-81. Once the user is authenticated, the payment computer creates or updates a payment URL for the shopping cart (step 114).</p> <p>The user then either requests more advertisements (step 24 in FIG. 2) and possibly adds another product to the shopping cart, requests display of the shopping cart (step 116), or requests purchase of the entire contents of the shopping cart (step 124). If the user requests display of the shopping cart (step 116), the buyer computer sends a fetch shopping cart request to the payment computer (step 118), and the payment computer and buyer computer (step 119) perform steps analogous to steps 64-81. The payment computer returns the contents of the shopping cart to the buyer computer (step 120), which displays the contents of the shopping cart (step 122). If the user requests that the entire contents of the shopping cart be purchased (step 124) the buyer computer causes the payment URL for the shopping cart to be activated (step 126) and the payment URL is processed in a manner analogous to the processing of payment URLs for individual products (beginning with step 36 in FIG. 2).” 8:3-32 (emphasis added).</p>
Claim 17 of The '492 Patent		
<p>17. A network-based sales system, comprising:</p> <p>at least one buyer computer for operation by a user desiring to buy products; at</p>	<p>a payment message -</p> <p>a message relating to a payment for one or more products, containing an authenticated user's payment information and</p>	<p>“Whenever the present application states that one computer sends a URL to another computer, it should be understood that in preferred embodiments the URL is sent in a standard HTTP request message, unless a URL message is specified as a redirection in the present application. The request message includes components of the URL as described by the standard HTTP protocol definition. These URL</p>

3/20/2009

Page 30 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
<p>least one shopping cart computer; and a shopping cart database connected to the shopping cart computer; the buyer computer and the shopping cart computer being interconnected by a public packet switched computer network; the buyer computer being programmed to receive a plurality of requests from a user to add a plurality of respective products to a shopping cart in the shopping cart database, and, in response to the requests to add the products, to send a plurality of respective shopping cart messages over the network to the shopping cart computer each of which comprises a product identifier identifying one of the plurality of products and at least one of which comprises a universal resource locator; the shopping cart computer being programmed to</p>	<p>sent to the buyer computer</p>	<p>components in the request message allow the server to provide a response appropriate to the URL. The term "URL" as used the present application is an example of a "link," which is a pointer to another document or form (including multimedia documents, hypertext documents including other links, or audio/video documents).” ‘314 Patent at 9:51-63</p> <p>“A payment URL looks like this: http://payment.openmarket.com/pay.cgi?hash:field1=value1&field2=value2” App. E, SOV0000149 (emphasis added).</p> <p>“Shopping Cart Mechanism how to write payment and shopping cart URLs These two types of URLs are very similar: Payment URL: http://payment.openmarket.com/bin/nph-payment.cgi?TICKET Add to shopping cart URL: http://payment.openmarket.com/bin/nph-cl.cgi?CARTTICKET here’s what a TICKET is: A TICKET is a signed collection of name-value pairs.” App. E of ‘314 Patent, SOV0000155-156, (emphasis added).</p> <p>“The user browses through the advertising document and eventually requests a product (step 32). This results in the buyer computer sending payment URL A to the payment computer (step 34). Payment URL A includes a product identifier that represents the product the user wishes to buy, a domain identifier that represents a domain of products to which the desired product belongs, a payment amount that represents the price of the product, a merchant computer identifier that represents merchant computer 14, a merchant account identifier that represents the particular merchant account to be credited with the payment amount, a duration time that represents the length of time for which access to the product is to be granted to the user after completion of the purchase transaction, an expiration time that represents a deadline beyond which this</p>

3/20/2009

Page 31 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
<p>receive the plurality of shopping cart messages, to modify the shopping cart in the shopping cart database to reflect the plurality of requests to add the plurality of products to the shopping cart, and to cause a payment message associated with the shopping cart to be created, the payment message comprising a universal resource locator; and</p>		<p>particular payment URL cannot be used, a buyer network address, and a payment URL authenticator that is a digital signature based on a cryptographic key. The payment URL authenticator is a hash of other information in the payment URL, the hash being defined by a key shared by the merchant and the operator of the payment computer.</p> <p>In an alternative embodiment, step 34 consists of the buyer computer sending a purchase product message to the merchant computer, and the merchant computer provides payment VRL A to the buyer computer in response to the purchase product message. In this alternative embodiment, payment URL A contains the same contents as above. The buyer computer then sends the payment URL A it has received from the merchant computer to the payment computer.</p> <p>When the payment computer receives the payment URL it verifies whether the payment URL authenticator was created from the contents of the payment URL using the cryptographic key (step 36). If not, the payment computer sends a document to the buyer computer indicating that access to the network sales system is denied (step 38). Otherwise, the payment computer determines whether the expiration time has past (step 40). If it has, the payment computer sends a document to the buyer computer indicating that the time has expired (step 41). Otherwise, the payment computer checks the buyer computer network address to see if it matches the one specified in the payment URL (step 42).” ‘314 Patent at 5:27- 6:2 (emphasis added).</p> <p>“The payment computer verifies whether the shopping cart URL authenticator was created from the contents of the shopping cart URL using a cryptographic key (step 110). If not, the payment computer sends a document to the buyer computer indicating that access to the network sales system is denied (step 112). Otherwise, before any modification to a user's shopping cart is allowed, user authentication is performed (step 113) in a manner analogous to steps 40-81. Once the user is authenticated, the payment computer creates or updates a payment URL for the shopping cart (step 114).</p>

3/20/2009

Page 32 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>The user then either requests more advertisements (step 24 in FIG. 2) and possibly adds another product to the shopping cart, requests display of the shopping cart (step 116), or requests purchase of the entire contents of the shopping cart (step 124). If the user requests display of the shopping cart (step 116), the buyer computer sends a fetch shopping cart request to the payment computer (step 118), and the payment computer and buyer computer (step 119) perform steps analogous to steps 64-81. The payment computer returns the contents of the shopping cart to the buyer computer (step 120), which displays the contents of the shopping cart (step 122). If the user requests that the entire contents of the shopping cart be purchased (step 124) the buyer computer causes the payment URL for the shopping cart to be activated (step 126) and the payment URL is processed in a manner analogous to the processing of payment URLs for individual products (beginning with step 36 in FIG. 2).” ‘314 Patent at 8:3-32 (emphasis added).</p>
<p>the buyer computer being programmed to receive a request from the user to purchase the plurality of products added to the shopping cart and to cause the payment message to be activated to initiate a payment transaction for the plurality of products added to the shopping cart; the shopping cart being a stored representation of a collection of products, the shopping cart database being a database of stored</p>	<p>to cause the payment message to be activated -</p> <p>upon request of the authenticated user, the buyer computer causes the submission of said payment message</p>	<p>“The user then either requests more advertisements (step 24 in FIG. 2) and possibly adds another product to the shopping cart, requests display of the shopping cart (step 116), or requests purchase of the entire contents of the shopping cart (step 124). If the user requests display of the shopping cart (step 116), the buyer computer sends a fetch shopping cart request to the payment computer (step 118), and the payment computer and buyer computer (step 119) perform steps analogous to steps 64-81. The payment computer returns the contents of the shopping cart to the buyer computer (step 120), which displays the contents of the shopping cart (step 122). If the user requests that the entire contents of the shopping cart be purchased (step 124) the buyer computer causes the payment URL for the shopping cart to be activated (step 126) and the payment URL is processed in a manner analogous to the processing of payment URLs for individual products (beginning with step 36 in FIG. 2).” ‘314 Patent at 8:14-32 (emphasis added).</p>

Claim Element(s)	Defendants' Construction	Support for Construction
representations of collections of products, and the shopping cart computer being a computer that modifies the stored representations of collections of products in the database.		
18. A method of operating a shopping cart computer in a public packet switched computer network comprising at least one buyer computer for operation by a user desiring to buy products, at least one shopping cart computer, and a shopping cart database connected to the shopping cart computer, the method comprising the steps of: receiving, at the shopping cart computer, a plurality of shopping cart messages sent over the network to the shopping cart computer by the buyer computer in response to receipt of a plurality of requests from a user to add a plurality of	<p>a payment message -</p> <p>a message relating to a payment for one or more products, containing an authenticated user's payment information and sent to the buyer computer</p>	<p>“Whenever the present application states that one computer sends a URL to another computer, it should be understood that in preferred embodiments the URL is sent in a standard HTTP request message, unless a URL message is specified as a redirection in the present application. The request message includes components of the URL as described by the standard HTTP protocol definition. These URL components in the request message allow the server to provide a response appropriate to the URL. The term "URL" as used the present application is an example of a "link," which is a pointer to another document or form (including multimedia documents, hypertext documents including other links, or audio/video documents).” ‘314 Patent at 9:51-63 (emphasis added).</p> <p>“A payment URL looks like this: http://payment.openmarket.com/pay.cgi?hash:field1=value1&field2=value 2” App. E of ‘314 Patent, SOV0000149 (emphasis added).</p> <p>“Shopping Cart Mechanism how to write payment and shopping cart URLs These two types of URLs are very similar: Payment URL: http://payment.openmarket.com/bin/nph-payment.cgi?TICKET</p>

3/20/2009

Page 34 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
<p>respective products to a shopping cart in the shopping cart database, each of the shopping cart messages comprising a product identifier identifying one of the plurality of products and at least one of which comprises a universal resource locator; modifying the shopping cart in the shopping cart database to reflect the plurality of requests to add the plurality of products to the shopping cart; and causing a payment message associated with the shopping cart to be created, the payment message comprising a universal resource locator;</p>		<p>Add to shopping cart URL: http://payment.openmarket.com/bin/nph-c1.cgi?CARTTICKET here's what a TICKET is: A TICKET is a signed collection of name-value pairs." App. E of '314 Patent, SOV0000155-156, (emphasis added).</p> <p>"The user browses through the advertising document and eventually requests a product (step 32). This results in the buyer computer sending payment URL A to the payment computer (step 34). Payment URL A includes a product identifier that represents the product the user wishes to buy, a domain identifier that represents a domain of products to which the desired product belongs, a payment amount that represents the price of the product, a merchant computer identifier that represents merchant computer 14, a merchant account identifier that represents the particular merchant account to be credited with the payment amount, a duration time that represents the length of time for which access to the product is to be granted to the user after completion of the purchase transaction, an expiration time that represents a deadline beyond which this particular payment URL cannot be used, a buyer network address, and a payment URL authenticator that is a digital signature based on a cryptographic key. The payment URL authenticator is a hash of other information in the payment URL, the hash being defined by a key shared by the merchant and the operator of the payment computer.</p> <p>In an alternative embodiment, step 34 consists of the buyer computer sending a purchase product message to the merchant computer, and the merchant computer provides payment VRL A to the buyer computer in response to the purchase product message. In this alternative embodiment, payment URL A contains the same contents as above. The buyer computer then sends the payment URL A it has received from the merchant computer to the payment computer.</p> <p>When the payment computer receives the payment URL it verifies whether the payment URL authenticator was created from the contents of the payment URL using the cryptographic key (step 36). If not, the payment computer sends a document to the buyer computer indicating that access to the network sales</p>

3/20/2009

Page 35 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>system is denied (step 38). Otherwise, the payment computer determines whether the expiration time has past (step 40). If it has, the payment computer sends a document to the buyer computer indicating that the time has expired (step 41). Otherwise, the payment computer checks the buyer computer network address to see if it matches the one specified in the payment URL (step 42).” ‘314 Patent at 5:27- 6:2 (emphasis added).</p> <p>“The payment computer verifies whether the shopping cart URL authenticator was created from the contents of the shopping cart URL using a cryptographic key (step 110). If not, the payment computer sends a document to the buyer computer indicating that access to the network sales system is denied (step 112). Otherwise, before any modification to a user's shopping cart is allowed, user authentication is performed (step 113) in a manner analogous to steps 40-81. Once the user is authenticated, the payment computer creates or updates a payment URL for the shopping cart (step 114).</p> <p>The user then either requests more advertisements (step 24 in FIG. 2) and possibly adds another product to the shopping cart, requests display of the shopping cart (step 116), or requests purchase of the entire contents of the shopping cart (step 124). If the user requests display of the shopping cart (step 116), the buyer computer sends a fetch shopping cart request to the payment computer (step 118), and the payment computer and buyer computer (step 119) perform steps analogous to steps 64-81. The payment computer returns the contents of the shopping cart to the buyer computer (step 120), which displays the contents of the shopping cart (step 122). If the user requests that the entire contents of the shopping cart be purchased (step 124) the buyer computer causes the payment URL for the shopping cart to be activated (step 126) and the payment URL is processed in a manner analogous to the processing of payment URLs for individual products (beginning with step 36 in FIG. 2).” ‘314 Patent at 8:3-32 (emphasis added).</p>
the buyer computer being programmed to receive a	to cause the payment message	“The user then either requests more advertisements (step 24 in FIG. 2) and possibly adds another product to the shopping cart, requests display of the

3/20/2009

Page 36 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
request from the user to purchase the plurality of products added to the shopping cart and to cause the payment message to be activated to initiate a payment transaction for the plurality of products added to the shopping cart; the shopping cart being a stored representation of a collection of products, the shopping cart database being a database of stored representations of collections of products, and the shopping cart computer being a computer that modifies the stored representations of collections of products in the database.	to be activated - upon request of the authenticated user, the buyer computer causes the submission of said payment message	shopping cart (step 116), or requests purchase of the entire contents of the shopping cart (step 124). If the user requests display of the shopping cart (step 116), the buyer computer sends a fetch shopping cart request to the payment computer (step 118), and the payment computer and buyer computer (step 119) perform steps analogous to steps 64-81. The payment computer returns the contents of the shopping cart to the buyer computer (step 120), which displays the contents of the shopping cart (step 122). If the user requests that the entire contents of the shopping cart be purchased (step 124) the buyer computer causes the payment URL for the shopping cart to be activated (step 126) and the payment URL is processed in a manner analogous to the processing of payment URLs for individual products (beginning with step 36 in FIG. 2).” ‘314 Patent at 8:14-32 (emphasis added).
35. A network-based sales system, comprising: at least one buyer computer for operation by a user desiring to buy products;		

3/20/2009

Page 37 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
at least one shopping cart computer; and a shopping cart database connected to the shopping cart computer; the buyer computer and the shopping cart computer being interconnected by a public packet switched computer network; the buyer computer being programmed to receive a plurality of requests from a user to add a plurality of respective products to a shopping cart in the shopping cart database, and, in response to the requests to add the products, to send a plurality of respective shopping cart messages over the network to the shopping cart computer each of which comprises a product identifier identifying one of the plurality of products; the shopping cart computer being programmed to receive the plurality of shopping cart messages, and to modify the shopping cart		

Claim Element(s)	Defendants' Construction	Support for Construction
in the shopping cart database to reflect the plurality of requests to add the plurality of products to the shopping cart; and		
<p>the buyer computer being programmed to receive a request from the user to purchase the plurality of products added to the shopping cart and to cause a payment message to be activated to initiate a payment transaction for the plurality of products added to the shopping cart;</p> <p>the shopping cart being a stored representation of a collection of products, the shopping cart database being a database of stored representations of collections of products, and the shopping cart computer being a computer that modifies the stored representations of collections of products in the database.</p>	<p>to cause a payment message to be activated -</p> <p>upon request of the authenticated user, the buyer computer causes the submission of said payment message</p> <p>a payment message -</p> <p>a message relating to a payment for one or more products, containing an authenticated user's payment information and sent to the buyer computer</p>	<p>"The user then either requests more advertisements (step 24 in FIG. 2) and possibly adds another product to the shopping cart, requests display of the shopping cart (step 116), or requests purchase of the entire contents of the shopping cart (step 124). If the user requests display of the shopping cart (step 116), the buyer computer sends a fetch shopping cart request to the payment computer (step 118), and the payment computer and buyer computer (step 119) perform steps analogous to steps 64-81. The payment computer returns the contents of the shopping cart to the buyer computer (step 120), which displays the contents of the shopping cart (step 122). If the user requests that the entire contents of the shopping cart be purchased (step 124) the buyer computer causes the payment URL for the shopping cart to be activated (step 126) and the payment URL is processed in a manner analogous to the processing of payment URLs for individual products (beginning with step 36 in FIG. 2)." '314 Patent at 8:14-32 (emphasis added).</p> <p>unless a URL message is specified as a redirection in the present application. The request message includes components of the URL as described by the standard HTTP protocol definition. These URL components in the request message allow the server to provide a response appropriate to the URL. The term "URL" as used the present application is an example of a "link," which is a pointer to another document or form (including multimedia documents, hypertext documents including other links, or audio/video documents)." '314 Patent at 9:51-63 (emphasis added).</p> <p>"A payment URL looks like this:</p>

3/20/2009

Page 39 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>http://payment.openmarket.com/pay.cgi?hash:field1=value1&field2=value2” App. E of ‘314 Patent, SOV0000149 (emphasis added).</p> <p>“Shopping Cart Mechanism how to write payment and shopping cart URLs These two types of URLs are very similar: Payment URL: http://payment.openmarket.com/bin/nph-payment.cgi?TICKET Add to shopping cart URL: http://payment.openmarket.com/bin/nph-cl.cgi?CARTTICKET here’s what a TICKET is: A TICKET is a signed collection of name-value pairs.” App. E of ‘314 Patent, SOV0000155-156, (emphasis added).</p> <p>“The user browses through the advertising document and eventually requests a product (step 32). This results in the buyer computer sending payment URL A to the payment computer (step 34). Payment URL A includes a product identifier that represents the product the user wishes to buy, a domain identifier that represents a domain of products to which the desired product belongs, a payment amount that represents the price of the product, a merchant computer identifier that represents merchant computer 14, a merchant account identifier that represents the particular merchant account to be credited with the payment amount, a duration time that represents the length of time for which access to the product is to be granted to the user after completion of the purchase transaction, an expiration time that represents a deadline beyond which this particular payment URL cannot be used, a buyer network address, and a payment URL authenticator that is a digital signature based on a cryptographic key. The payment URL authenticator is a hash of other information in the payment URL, the hash being defined by a key shared by the merchant and the operator of the payment computer.</p> <p>In an alternative embodiment, step 34 consists of the buyer computer sending a purchase product message to the merchant computer, and the merchant computer provides payment VRL A to the buyer computer in response to the purchase product message. In this alternative embodiment, payment URL A</p>

3/20/2009

Page 40 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>contains the same contents as above. The buyer computer then sends the payment URL A it has received from the merchant computer to the payment computer.</p> <p>When the payment computer receives the payment URL it verifies whether the payment URL authenticator was created from the contents of the payment URL using the cryptographic key (step 36). If not, the payment computer sends a document to the buyer computer indicating that access to the network sales system is denied (step 38). Otherwise, the payment computer determines whether the expiration time has past (step 40). If it has, the payment computer sends a document to the buyer computer indicating that the time has expired (step 41). Otherwise, the payment computer checks the buyer computer network address to see if it matches the one specified in the payment URL (step 42).” ‘314 Patent at 5:27- 6:2 (emphasis added).</p> <p>“The payment computer verifies whether the shopping cart URL authenticator was created from the contents of the shopping cart URL using a cryptographic key (step 110). If not, the payment computer sends a document to the buyer computer indicating that access to the network sales system is denied (step 112). Otherwise, before any modification to a user's shopping cart is allowed, user authentication is performed (step 113) in a manner analogous to steps 40-81. Once the user is authenticated, the payment computer creates or updates a payment URL for the shopping cart (step 114).</p> <p>The user then either requests more advertisements (step 24 in FIG. 2) and possibly adds another product to the shopping cart, requests display of the shopping cart (step 116), or requests purchase of the entire contents of the shopping cart (step 124). If the user requests display of the shopping cart (step 116), the buyer computer sends a fetch shopping cart request to the payment computer (step 118), and the payment computer and buyer computer (step 119) perform steps analogous to steps 64-81. The payment computer returns the contents of the shopping cart to the buyer computer (step 120), which displays the contents of the shopping cart (step 122). If the user requests that the entire contents of the shopping cart be purchased (step 124) the buyer computer</p>

Claim Element(s)	Defendants' Construction	Support for Construction
		causes the payment URL for the shopping cart to be activated (step 126) and the payment URL is processed in a manner analogous to the processing of payment URLs for individual products (beginning with step 36 in FIG. 2)." '314 Patent at 8:3-32 (emphasis added).
36. A method of operating a shopping cart computer in a public packet switched computer network comprising at least one buyer computer for operation by a user desiring to buy products, at least one shopping cart computer, and a shopping cart database connected to the shopping cart computer, the method comprising the steps of: receiving, at the shopping cart computer, a plurality of shopping cart messages sent over the network to the shopping cart computer by the buyer computer in response to receipt of a plurality of requests from a user to add a plurality of respective products to a shopping cart in the shopping cart database, each	<p>to cause a payment message to be activated -</p> <p>upon request of the authenticated user, the buyer computer causes the submission of said payment message</p> <p>a payment message -</p> <p>a message relating to a payment for one or more products, containing an authenticated user's payment information and sent to the buyer computer</p>	<p>"The user then either requests more advertisements (step 24 in FIG. 2) and possibly adds another product to the shopping cart, requests display of the shopping cart (step 116), or requests purchase of the entire contents of the shopping cart (step 124). If the user requests display of the shopping cart (step 116), the buyer computer sends a fetch shopping cart request to the payment computer (step 118), and the payment computer and buyer computer (step 119) perform steps analogous to steps 64-81. The payment computer returns the contents of the shopping cart to the buyer computer (step 120), which displays the contents of the shopping cart (step 122). If the user requests that the entire contents of the shopping cart be purchased (step 124) the buyer computer causes the payment URL for the shopping cart to be activated (step 126) and the payment URL is processed in a manner analogous to the processing of payment URLs for individual products (beginning with step 36 in FIG. 2)." '314 Patent at 8:14-32 (emphasis added).</p> <p>unless a URL message is specified as a redirection in the present application. The request message includes components of the URL as described by the standard HTTP protocol definition. These URL components in the request message allow the server to provide a response appropriate to the URL. The term "URL" as used the present application is an example of a "link," which is a pointer to another document or form (including multimedia documents, hypertext documents including other links, or audio/video documents)." '314 Patent at 9:51-63 (emphasis added).</p> <p>"A payment URL looks like this:</p>

3/20/2009

Page 42 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
<p>of the shopping cart messages comprising a product identifier identifying one of the plurality of products; and modifying the shopping cart in the shopping cart database to reflect the plurality of requests to add the plurality of products to the shopping cart; the buyer computer being programmed to receive a request from the user to purchase the plurality of products added to the shopping cart and to cause a payment message to be activated to initiate a payment transaction for the plurality of products added to the shopping cart; the shopping cart being a stored representation of a collection of products, the shopping cart database being a database of stored representations of collections of products, and the shopping cart computer being a computer that</p>		<p>http://payment.openmarket.com/pay.cgi?hash:field1=value1&field2=value2” App. E of ‘314 Patent, SOV0000149 (emphasis added).</p> <p>“Shopping Cart Mechanism how to write payment and shopping cart URLs These two types of URLs are very similar: Payment URL: http://payment.openmarket.com/bin/nph-payment.cgi?TICKET Add to shopping cart URL: http://payment.openmarket.com/bin/nph-cl.cgi?CARTTICKET here’s what a TICKET is: A TICKET is a signed collection of name-value pairs.” App. E of ‘314 Patent, SOV0000155-156, (emphasis added).</p> <p>“The user browses through the advertising document and eventually requests a product (step 32). This results in the buyer computer sending payment URL A to the payment computer (step 34). Payment URL A includes a product identifier that represents the product the user wishes to buy, a domain identifier that represents a domain of products to which the desired product belongs, a payment amount that represents the price of the product, a merchant computer identifier that represents merchant computer 14, a merchant account identifier that represents the particular merchant account to be credited with the payment amount, a duration time that represents the length of time for which access to the product is to be granted to the user after completion of the purchase transaction, an expiration time that represents a deadline beyond which this particular payment URL cannot be used, a buyer network address, and a payment URL authenticator that is a digital signature based on a cryptographic key. The payment URL authenticator is a hash of other information in the payment URL, the hash being defined by a key shared by the merchant and the operator of the payment computer.</p> <p>In an alternative embodiment, step 34 consists of the buyer computer sending a purchase product message to the merchant computer, and the merchant computer provides payment VRL A to the buyer computer in response to the purchase product message. In this alternative embodiment, payment URL A</p>

3/20/2009

Page 43 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
<p>modifies the stored representations of collections of products in the database.</p>		<p>contains the same contents as above. The buyer computer then sends the payment URL A it has received from the merchant computer to the payment computer.</p> <p>When the payment computer receives the payment URL it verifies whether the payment URL authenticator was created from the contents of the payment URL using the cryptographic key (step 36). If not, the payment computer sends a document to the buyer computer indicating that access to the network sales system is denied (step 38). Otherwise, the payment computer determines whether the expiration time has past (step 40). If it has, the payment computer sends a document to the buyer computer indicating that the time has expired (step 41). Otherwise, the payment computer checks the buyer computer network address to see if it matches the one specified in the payment URL (step 42).” ‘314 Patent at 5:27- 6:2 (emphasis added).</p> <p>“The payment computer verifies whether the shopping cart URL authenticator was created from the contents of the shopping cart URL using a cryptographic key (step 110). If not, the payment computer sends a document to the buyer computer indicating that access to the network sales system is denied (step 112). Otherwise, before any modification to a user's shopping cart is allowed, user authentication is performed (step 113) in a manner analogous to steps 40-81. Once the user is authenticated, the payment computer creates or updates a payment URL for the shopping cart (step 114).</p> <p>The user then either requests more advertisements (step 24 in FIG. 2) and possibly adds another product to the shopping cart, requests display of the shopping cart (step 116), or requests purchase of the entire contents of the shopping cart (step 124). If the user requests display of the shopping cart (step 116), the buyer computer sends a fetch shopping cart request to the payment computer (step 118), and the payment computer and buyer computer (step 119) perform steps analogous to steps 64-81. The payment computer returns the contents of the shopping cart to the buyer computer (step 120), which displays the contents of the shopping cart (step 122). If the user requests that the entire contents of the shopping cart be purchased (step 124) the buyer computer</p>

Claim Element(s)	Defendants' Construction	Support for Construction
		causes the payment URL for the shopping cart to be activated (step 126) and the payment URL is processed in a manner analogous to the processing of payment URLs for individual products (beginning with step 36 in FIG. 2)." '314 Patent at 8:3-32 (emphasis added).
Claim 15 and Its Dependent Claims of The '492 patent		
15. A hypertext statement system, comprising: a client computer for operation by a client user; and one or more server computers for operation by a server user; the client computer and the server computers being interconnected by a public packet switched computer network; at least one of the server computers being programmed to record information pertaining to purchase transaction records in a database, and to transmit a statement document comprising the purchase transaction records to the client computer over the network; the client computer being	hypertext link - text in a document that forms a navigational element pointing, for example, to another document, or form, or resource.	<p>"What Is Hypertext?</p> <p>Hypertext offers a way of moving from one document to another through word links. Each marked word in a document has a link to another document or resource. This allows you to follow various paths within the system based on the contents of each document in a nonlinear fashion, according to subject. For example, when a word or concept is introduced in one document, you can move to another document that may simply be a definition or explanation of the term, or even a long document about that subject. The reader can open the second document, read it, and then return to the original, or move on to other documents based on the marked words in each new document. Hypermedia works much like hypertext, but allows words in a document to be linked to nontext files of images, sounds, QuickTime movies, and so on." The Internet Business Book - produced at CNZ0012914. <i>See, e.g.</i>, CNZ 13130.</p> <p>"The operation of the Web relies on hypertext as its means of interacting with users. Hypertext is basically the same as regular text - it can be stored, read, searched, or edited - with an important exception: hypertext contains connections within the text to other documents.</p> <p>For instance, suppose you were able to somehow select (with a mouse or</p>

3/20/2009

Page 45 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
<p>programmed to display the statement document to receive a request from the client user to display transaction details corresponding to a portion of the statement document displayed by the client computer, at least one of the server computers being programmed to respond to activation of the transaction detail hypertext link by transmitting the transaction details to the client computer over the network as a transaction detail document.</p>		<p>with your finger) the word "hypertext" in the sentence before this one. In a hypertext system, you would then have one or more documents related to hypertext appear before you - a history of hypertext, for example, or the Webster's definition of hypertext. These new texts would themselves have links and connections to other documents - continually selecting text would take you on a free- associative tour of information. In this way, hypertext links, called hyperlinks, can create a complex virtual web of connections.</p> <p>Hypermedia is hypertext with a difference - hypermedia documents contain links not only to other pieces of text, but also to other forms of media - sounds, images, and movies. Images themselves can be selected to link to sounds or documents. Here are some simple examples of hypermedia:</p> <p>You are reading a text on the Hawaiian language. You select a Hawaiian phrase, then hear the phrase as spoken in the native tongue.</p> <p>You are a law student studying the Hawaii Revised Statutes. By selecting a passage, you find precedents from a 1920 Supreme Court ruling stored at Cornell. Cross-referenced hyperlinks allow you to view any one of 520 related cases with audio annotations.</p> <p>Looking at a company's floorplan, you are able to select an office by touching a room. The employee's name and picture appears with a list of their current projects.</p> <p>You are a scientist doing work on the cooling of steel springs. By selecting text in a research paper, you are able to view a computer-generated movie of a cooling spring. By selecting a button you are able to receive a program which will perform thermodynamic calculations.</p>

3/20/2009

Page 46 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>A student reading a digital version of an art magazine can select a work to print or display in full. If the piece is a sculpture, she can request to see a movie of the sculpture rotating. By interactively controlling the movie, she can zoom in to see more detail.</p> <p>The Web, although still in its early years, allows many of these examples to work in real life. It facilitates the easy exchange of hypermedia through networked environments from anything as small as two Macintoshes connected together to something as large as the global Internet.” Entering the World-Wide Web: A Guide to Cyberspace , produced at CNZ0013886. <i>See, e.g.</i>, CNZ 13887 (emphasis added).</p> <p>“What are hypertext and hypermedia? ...</p> <p>The documents that the browsers display are hypertext documents. Hypertext is text with pointers to other text. The browsers let you deal with the pointers in a transparent way - you clicking on a part of the text, and you are presented with the text that is pointed to.</p> <p>Hypermedia is a superset of hypertext -- it is any medium with pointers to other media. This means that browsers might not display a text file, but might display images or sound or animations.” WWW FAQ v. 0.1, <i>see</i> CNZ0014216.</p> <p>“Hyper-:</p> <p>This prefix has a dictionary meaning of above, excessive or beyond. Its use in computing, as exemplified below, is perhaps related to analogous jargon or buzzwords coined by the science fiction community, e.g. hyperspace, a speculative extra physical dimension.</p>

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>The hyper prefix now has a strong historical momentum, and seems likely to endure. However, with hindsight other prefixes such as meta-(among, about or between), or inter- might have been more accurate descriptors of the structural emphasis of hypermedia; the 'hyper-level' is strictly at a meta-level to the semantic or content level. (It may be interesting to note that in the meantime, metatext has become a favourite term of the Structuralist schools of literary criticism, and Intermedia is the proprietary name of an advanced hypermedia system.)</p> <p>Hypermedia :</p> <p>Taken to be a generic approach to constructing non-linear, computer-supported materials, as embodied by a number of commercial and academic program shells; the term is also used to describe the materials themselves. Hypermedia itself is a subset of the more general class of interactive multimedia -- not all implementations of which support 'hyper' functionality. The term hypermedia will be used throughout this book unless the context is uniquely text-based, in which case hypertext will be preferred.</p> <p>Hypermedia is used here as a singular noun, as per the accepted contemporary use of the strictly plural noun data.</p> <p>Hypertext:</p> <p>Hypertext, and hypertext programs are a subset of hypermedia and hypermedia programs (albeit the largest, most central, and probably the most commercially significant, see Figure 1.1). Ted Nelson claims to have originally coined the term hypertext (meaning writing with and for the computer) in the early 1960s." Hypertext and Hypermedia, <i>see e.g.</i>, CNZ 15885-15887 (emphasis added).</p>

3/20/2009

Page 48 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>“Hot spots Meanwhile, several programs have been made exploring these ideas, both commercially and academically. Most of them use "hot spots" in documents, like icons, or highlighted phrases, as sensitive areas, touching a hot spot with a mouse brings up the relevant information, or expands the text on the screen to include it. Imagine, then, the references in this document, all being associated with the network address of the thing to which they referred, so that while reading this document you could skip to them with a click of the mouse.</p> <p>"Hypertext" is a term coined in the 1950s by Ted Nelson [...], which has become popular for these systems, although it is used to embrace two different ideas. One idea (which is relevant to this problem) is the concept: "Hypertext": Human- readable information linked together in an unconstrained way.</p> <p>The other idea, which is independent and largely a question of technology and time, is of multimedia documents which include graphics, speech and video. I will not discuss this latter aspect further here, although I will use the word "Hypermedia" to indicate that one is not bound to text.” Information Management: A Proposal, <i>see</i> CNZ0021631 (emphasis added).</p> <p>“2 / Concepts of Hypertext and Hypermedia</p> <p style="text-align: center;">Hypertext and Hypermedia- Definition and History</p> <p style="text-align: center;">What does this rainy-night tale have to do with hypertext and hypermedia? Everything. The essential distinction of both hypertext</p>

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>and hypermedia is the automation of the linking process that Nancy and I went through, first to find General Buford and then to investigate the other points that interested us.</p> <p>Hyper-definitions</p> <p>Hypertext is the use of a computer to automate the links and follow their paths through chunks of text information until the user is satisfied (figures 1.1 and 1.2). The essence of hypermedia is the analogous computerized linkage of and navigation through chunks of information in several different media (known as multimedia information). Non-text information might be two- or three-dimensional graphic images, animation, film, video tape, or monaural or stereo sound recordings (figure 1.3)." Hypercard, Hypertext & Hypermedia for Libraries and Media Centers, <i>see</i> CNZ0022045-22062 (emphasis added).</p> <p>"Hypermedia - A combination of hypertext (q.v.) and multimedia (q.v.). hypertext - Documents that contain links to other documents; selecting a link automatically displays the second document." The Whole Internet, <i>see</i> CNZ0024174 (emphasis added).</p>
<p>41. A hypertext statement system in accordance with claim 15, wherein the statement document is sent by at least one of the server computers to the client computer in response to a statement URL sent by the client computer to at least</p>	<p>statement URL -</p> <p>a standard HTTP request message with URL to the Statement Document including its path on the server on which it resides</p>	<p>"The URL naming system consists of three parts: the transfer format, the host name of the machine that holds the file, and the path to the file. An example of a URL may be: http://www.college.univ.edu/Adir/Bdir/Cdir/page.html, where "http" represents the transfer protocol; a colon and two forward slashes (://) are used to separate the transfer format from the host name; "www.college.univ.edu" is the host name in which "www" denotes that the file being requested is a Web page; "/Adir/Bdir/Cdir" is a set of</p>

3/20/2009

Page 50 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
one of the server computers.		<p>directory names in a tree structure, or a path, on the host machine; and "page.html" is the file name.” ‘639 patent at 2: 26-36; ‘780 patent at 2:28-42; Soverain Software LLC v. Amazon.com, Inc. Claim Construction Order 4/7/2005 at 5-6 (emphasis added).</p> <p>“Whenever the present application states that one computer sends a URL to another computer, it should be understood that in preferred embodiments the URL is sent in a standard HTTP request message, unless a URL message is specified as a redirection in the present application. The request message includes components of the URL as described by the standard HTTP protocol definition. These URL components in the request message allow the server to provide a response appropriate to the URL. The term "URL" as used the present application is an example of a "link," which is a pointer to another document or form (including multimedia documents, hypertext documents including other links, or audio/video documents).” The ‘314 Patent at 9:51-63 (emphasis added).</p> <p>“Appendix D describes how documents are named with Uniform Resource Locators (URLs) in the network of computers,” ‘314 Patent at 10:15-17 (emphasis added)..</p> <p>“Current names are basically location specifiers (addresses). These may be known as Uniform Resource Locators (URLs). They give the necessary parts of an address for a reader to access an information provider using the given protocol, and ask for the object required. Examples of names used by various protocols include:</p> <p>***</p> <p>HTTP (Berners-Lee 1991) Host name or IP-address</p>

3/20/2009

Page 51 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>[TCP port] local object id" App. D to the '314 Patent at 3-4.</p> <p>"Structure of names and addresses. A physical address is required in order for</p> <ul style="list-style-type: none"> - The user's program to contact the server - The server to search and index, retrieve a object, or look up the name; - The user's program to locate an individual position or element within a object. <p>This suggests that a name be structured, such that the parts necessary for these three operations be separate and only used by those system elements which need those parts. This corresponds to the basic principle of information hiding. In fact, four parts are necessary, including the indicator of the naming scheme to be used:</p> <p>The naming scheme: a registered identifier for the protocol.</p> <p>The name of a suitable server. The format of this part must be well defined. It will depend on the lower-layer protocols in use. Systems which use widely distributed information, such as x.500 and NNTP, do not need this part as each client generally contacts his nearest server (or a particular server).</p> <p>Information to be passed to the server. This may be private to the server, as all names may be generated and used by the same server. This part of the name</p>

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>should be opaque to the client.</p> <p>Information to be used by the application once the object has been retrieved. This part is private to the application (or, more strictly, the data format) and so cannot be defined here.” App. D to the ‘314 Patent at 6-7.</p> <p>“This section describes the syntax for. ‘Uniform resource Locators’ (URLs) : that is, basically physical addresses of objects which are retrievable using protocols already deployed on the net. The generic syntax provides a framework for new schemes for names to be resolved using as yet undefined protocols.</p> <p>The syntax is described in two parts. Firstly, we give the syntax rules of a completely specified name; secondly, we give the rules under which parts of the name may be omitted in a well-defined context.</p> <p>Full form A complete URL consists of a naming scheme specifier followed by a string whose format is a function of the naming scheme. For locators of information on the internet, a common syntax is used for the IP address part. A BNF description of the URL syntax is given in an a later section. The components are as follows.</p> <p>This represents a part of, fragment of, or a sub-function within, an object or object. Its syntax and semantics are defined by the application responsible for the object, or the specification of the content type of the object. The only definition here is of the allowed characters by which it may</p>

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>be represented in a URL.</p> <p>The fragment-id follows the URL of the whole object from which it is separated by a hash sign (# I . If the fragment-id is void, the hash sign may be omitted: A void fragment-id with or without the hash sign means that the URL refers to the whole object .</p> <p>While this hook is allowed for identification of fragments, the question of addressing of parts of objects, or of the grouping of objects and relationship between contained and containing objects, is not addressed by this object.</p> <p>This object does not address the question of objects which are different versions of a "living" object, nor of expressing the relationships between different versions and the living object .</p> <p>Scheme</p> <p>Within the URL of a object, the first element is the name of the scheme, separated from the rest of the object by a colon. The rest of the URL follows the colon in a format depending on the scheme.</p> <p>Internet protocol parts</p> <p>Those schemes which refer to internet protocols have a common syntax for the rest of the object name. This starts with a double slash "/" to indicate its presence, and continues until the following slash //I. Within that section are</p> <p>- An optional user name, if this must be quoted to the server, followed by a commercial at sign "@I. (Use of this field is discouraged. Provision of encoding a password after the user name, delimited by a</p>

3/20/2009

Page 54 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>colon, could be made but obviously is only useful when the password is public, in which case it should not be necessary, so that is also discouraged .)</p> <p>- The internet domain name of the host in RFC1037 format (or, optionally and less advisably, the IP address as a set of four decimal digits)</p> <p>- The port number, if it is not the default number for the protocol, is given in decimal notation after a colon.</p> <p>Path - The rest of the locator is known as the 'path.' It may define details of how the client should communicate with the server, including information to be passed transparently to the server without any processing by the client. The path is interpreted in a manner dependent on the protocol being used. However, when it contains slashes, these must imply a hierarchical structure.” App. D to ‘314 Patent, p. 8-9.</p> <p>“With reference now to FIG. 4, a user can request display of a "smart statement" that lists purchase transactions for a given month (step 128). When the buyer computer receives such a request, it sends a smart statement URL to the payment computer (step 130).</p> <p>When the payment computer receives the smart statement URL, it verifies whether the smart statement URL authenticator was created from the contents of the smart statement URL using a cryptographic key (step 132). If not, the payment computer sends a document to the buyer computer indicating that access is denied (step 134). Otherwise, the</p>

3/20/2009

Page 55 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>payment computer checks to determine whether the buyer network address in the smart statement URL matches the buyer computer's actual network address (step 136). If not, the payment computer sends a document to the buyer computer indicating that access is denied (step 138). Otherwise (step 140), the payment computer and buyer computer perform a set of steps analogous to steps 64-81 in FIG. 2 (payment computer requests account name and password, user provides the requested information, and payment computer verifies the information).</p> <p>In an alternative embodiment steps 132-138 are omitted.</p> <p>After verification of account information is complete, the payment computer retrieves the requested settlement data from the settlement database, creates a smart statement document for the buyer, and sends the smart statement document to the buyer computer (step 142). An example of a smart statement document is shown in FIG. 11. Each purchase transaction record in the smart statement document includes the data of the transaction, the name of the merchant, an identification of the product, and the payment amount for the product. The smart statement document also includes a transaction detail URL for each purchase transaction (these URLs, or hypertext links, are discussed below and are not shown in FIG. 11). The smart statement document also identifies previous statements that the user may wish to have displayed. The buyer computer displays the retrieved document (step 144), and the user may request transaction details for a particular transaction listed on the smart statement (step 146). If so, the buyer computer sends a transaction detail URL (or "payment detail URL") to the payment computer (step 148). The transaction detail URL includes a transaction identifier, a buyer network address, and a transaction detail URL authenticator. When the payment computer receives the transaction</p>

Claim Element(s)	Defendants' Construction	Support for Construction
		detail URL, it performs (step 150) a set of steps analogous to steps 132-140 (verification of URL authenticator, buyer network address, and account information). The payment computer then retrieves from the settlement database data corresponding to the payment transaction specified in the transaction detail URL, creates a transaction detail document, and sends it to the buyer computer (step 152).' 492 Patent at 8:32-9:19 (emphasis added). '492 Patent, Fig. 4A.
Claim 16 and Its Dependent Claims of The '492 patent		
16. A method of operating a server computer in a hypertext statement system comprising a client computer for operation by a client user, and one or more server computers for operation by a server user, the client computer and the server computers being interconnected by a public packet switched computer network, the method comprising the steps of: recording, at one of the server computers, information pertaining to purchase transaction records in a database; and	hypertext link - text in a document that forms a navigational element pointing, for example, to another document, or form, or resource.	<p>"What Is Hypertext?</p> <p>Hypertext offers a way of moving from one document to another through word links. Each marked word in a document has a link to another document or resource. This allows you to follow various paths within the system based on the contents of each document in a nonlinear fashion, according to subject. For example, when a word or concept is introduced in one document, you can move to another document that may simply be a definition or explanation of the term, or even a long document about that subject. The reader can open the second document, read it, and then return to the original, or move on to other documents based on the marked words in each new document. Hypermedia works much like hypertext, but allows words in a document to be linked to nontext files of images, sounds, QuickTime movies, and so on." The Internet Business Book - produced at CNZ0012914. <i>See, e.g.</i>, CNZ 13130 (emphasis added).</p> <p>"The operation of the Web relies on hypertext as its means of interacting with users. Hypertext is basically the same as regular text - it can be</p>

3/20/2009

Page 57 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
<p>transmitting a statement document comprising the purchase transaction records to the client computer over the network; the client computer being programmed to display the statement document, to receive a request from the client user to display transaction details corresponding to a portion of the statement document displayed by the client computer, and to cause a transaction detail hypertext link corresponding to the portion of the statement document to be activated; at least one of the server computers being programmed to respond to activation of the transaction detail hypertext link by transmitting the transaction details to the client computer over the network as a transaction detail document.</p>		<p>stored, read, searched, or edited - with an important exception: hypertext contains connections within the text to other documents.</p> <p>For instance, suppose you were able to somehow select (with a mouse or with your finger) the word "hypertext" in the sentence before this one. In a hypertext system, you would then have one or more documents related to hypertext appear before you - a history of hypertext, for example, or the Webster's definition of hypertext. These new texts would themselves have links and connections to other documents - continually selecting text would take you on a free- associative tour of information. In this way, hypertext links, called hyperlinks, can create a complex virtual web of connections.</p> <p>Hypermedia is hypertext with a difference - hypermedia documents contain links not only to other pieces of text, but also to other forms of media - sounds, images, and movies. Images themselves can be selected to link to sounds or documents. Here are some simple examples of hypermedia:</p> <p>You are reading a text on the Hawaiian language. You select a Hawaiian phrase, then hear the phrase as spoken in the native tongue.</p> <p>You are a law student studying the Hawaii Revised Statutes. By selecting a passage, you find precedents from a 1920 Supreme Court ruling stored at Cornell. Cross-referenced hyperlinks allow you to view any one of 520 related cases with audio annotations.</p> <p>Looking at a company's floorplan, you are able to select an office by touching a room. The employee's name and picture appears with a list of their current projects.</p>

3/20/2009

Page 58 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>You are a scientist doing work on the cooling of steel springs. By selecting text in a research paper, you are able to view a computer-generated movie of a cooling spring. By selecting a button you are able to receive a program which will perform thermodynamic calculations.</p> <p>A student reading a digital version of an art magazine can select a work to print or display in full. If the piece is a sculpture, she can request to see a movie of the sculpture rotating. By interactively controlling the movie, she can zoom in to see more detail.</p> <p>The Web, although still in its early years, allows many of these examples to work in real life. It facilitates the easy exchange of hypermedia through networked environments from anything as small as two Macintoshes connected together to something as large as the global Internet.” Entering the World-Wide Web: A Guide to Cyberspace , produced at CNZ0013886. <i>See, e.g.,</i> CNZ 13887 (emphasis added).</p> <p>“What are hypertext and hypermedia? ...</p> <p>The documents that the browsers display are hypertext documents. Hypertext is text with pointers to other text. The browsers let you deal with the pointers in a transparent way - you clicking on a part of the text, and you are presented with the text that is pointed to.</p> <p>Hypermedia is a superset of hypertext -- it is any medium with pointers to other media. This means that browsers might not display a text file, but might display images or sound or animations.” WWW FAQ v. 0.1, <i>see</i> CNZ0014216 (emphasis added).</p> <p>“Hyper-:</p>

3/20/2009

Page 59 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>This prefix has a dictionary meaning of above, excessive or beyond. Its use in computing, as exemplified below, is perhaps related to analogous jargon or buzzwords coined by the science fiction community, e.g. hyperspace, a speculative extra physical dimension. The hyper prefix now has a strong historical momentum, and seems likely to endure. However, with hindsight other prefixes such as meta-(among, about or between), or inter- might have been more accurate descriptors of the structural emphasis of hypermedia; the 'hyper-level' is strictly at a meta-level to the semantic or content level. (It may be interesting to note that in the meantime, metatext has become a favourite term of the Structuralist schools of literary criticism, and Intermedia is the proprietary name of an advanced hypermedia system.)</p> <p>Hypermedia :</p> <p>Taken to be a generic approach to constructing non-linear, computer-supported materials, as embodied by a number of commercial and academic program shells; the term is also used to describe the materials themselves. Hypermedia itself is a subset of the more general class of interactive multimedia -- not all implementations of which support 'hyper' functionality. The term hypermedia will be used throughout this book unless the context is uniquely text-based, in which case hypertext will be preferred.</p> <p>Hypermedia is used here as a singular noun, as per the accepted contemporary use of the strictly plural noun data.</p> <p>Hypertext:</p> <p>Hypertext, and hypertext programs are a subset of hypermedia and hypermedia programs (albeit the largest, most central, and probably the</p>

3/20/2009

Page 60 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>most commercially significant, see Figure 1.1). Ted Nelson claims to have originally coined the term hypertext (meaning writing with and for the computer) in the early 1960s. Hypertext and Hypermedia, <i>see e.g.</i>, CNZ 15885-15887 (emphasis added).</p> <p>“Hot spots Meanwhile, several programs have been made exploring these ideas, both commercially and academically. Most of them use "hot spots" in documents, like icons, or highlighted phrases, as sensitive areas, touching a hot spot with a mouse brings up the relevant information, or expands the text on the screen to include it. Imagine, then, the references in this document, all being associated with the network address of the thing to which they referred, so that while reading this document you could skip to them with a click of the mouse.</p> <p>"Hypertext" is a term coined in the 1950s by Ted Nelson [...], which has become popular for these systems, although it is used to embrace two different ideas. One idea (which is relevant to this problem) is the concept: "Hypertext": Human- readable information linked together in an unconstrained way.</p> <p>The other idea, which is independent and largely a question of technology and time, is of multimedia documents which include graphics, speech and video. I will not discuss this latter aspect further here, although I will use the word "Hypermedia" to indicate that one is not bound to text." Information Management: A Proposal, <i>see</i> CNZ0021631 (emphasis added).</p> <p>“2 / Concepts of Hypertext and Hypermedia</p> <p style="text-align: center;">Hypertext and Hypermedia-</p>

Claim Element(s)	Defendants' Construction	Support for Construction
		<p style="text-align: center;">Definition and History</p> <p>What does this rainy-night tale have to do with hypertext and hypermedia? Everything. The essential distinction of both hypertext and hypermedia is the automation of the linking process that Nancy and I went through, first to find General Buford and then to investigate the other points that interested us.</p> <p style="text-align: center;">Hyper-definitions</p> <p>Hypertext is the use of a computer to automate the links and follow their paths through chunks of text information until the user is satisfied (figures 1.1 and 1.2). The essence of hypermedia is the analogous computerized linkage of and navigation through chunks of information in several different media (known as multimedia information). Non-text information might be two- or three-dimensional graphic images, animation, film, video tape, or monaural or stereo sound recordings (figure 1.3).” Hypercard, Hypertext & Hypermedia for Libraries and Media Centers, <i>see</i> CNZ0022045-22062 (emphasis added).</p> <p>“Hypermedia - A combination of hypertext (q.v.) and multimedia (q.v.). hypertext - Documents that contain links to other documents; selecting a link automatically displays the second document.” The Whole Internet, <i>see</i> CNZ0024174 (emphasis added).</p>
76. The method of claim 16, wherein the statement document is sent by at least one of the server computers to the client computer in	<p>statement URL -</p> <p>a standard HTTP request message with URL to the Statement Document</p>	<p>“The URL naming system consists of three parts: the transfer format, the host name of the machine that holds the file, and the path to the file. An example of a URL may be: http://www.college.univ.edu/Adir/Bdir/Cdir/page.html, where "http" represents the transfer protocol; a colon and</p>

3/20/2009

Page 62 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
<p>response to a statement URL sent by the client computer to at least one of the server computers.</p>	<p>including its path on the server on which it resides</p>	<p>two forward slashes (://) are used to separate the transfer format from the host name; "www.college.univ.edu" is the host name in which "www" denotes that the file being requested is a Web page; "/Adir/Bdir/Cdir" is a set of directory names in a tree structure, or a path, on the host machine; and "page.html" is the file name. '639 patent at 2:26-36; '780 patent at col. 2: 28-42; Soverain Software LLC v. Amazon.com, Inc. Claim Construction Order 4/7/2005 at 5-6 (emphasis added).</p> <p>"Whenever the present application states that one computer sends a URL to another computer, it should be understood that in preferred embodiments the URL is sent in a standard HTTP request message, unless a URL message is specified as a redirection in the present application. The request message includes components of the URL as described by the standard HTTP protocol definition. These URL components in the request message allow the server to provide a response appropriate to the URL. The term "URL" as used the present application is an example of a "link," which is a pointer to another document or form (including multimedia documents, hypertext documents including other links, or audio/video documents)." The '314 Patent at 9:51-63 (emphasis added).</p> <p>"Appendix D describes how documents are named with Uniform Resource Locators (URLs) in the network of computers," '314 Patent at 10:15-17 (emphasis added).</p> <p>"Current names are basically location specifiers (addresses). These may be known as Uniform Resource Locators (URLs). They give the necessary parts of an address for a reader to access an information provider using the given protocol, and ask for the object required. Examples of names used by various protocols include:</p>

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>***</p> <p>HTTP (Berners-Lee 1991) Host name or IP-address [TCP port] local object id" App. D to the '314 Patent at 3-4(emphasis added).</p> <p>"Structure of names and addresses. A physical address is required in order for - The user's program to contact the server - The server to search and index, retrieve a object, or look up the name; - The user's program to locate an individual position or element within a object.</p> <p>This suggests that a name be structured, such that the parts necessary for these three operations be separate and only used by those system elements which need those parts. This corresponds to the basic principle of information hiding. In fact, four parts are necessary, including the indicator of the naming scheme to be used:</p> <p>The naming scheme: a registered identifier for the protocol.</p> <p>The name of a suitable server. The format of this part must be well defined. It will depend on the lower-layer protocols in use. Systems which use widely distributed information, such as x.500 and NNTP, do not need this part as each client generally contacts his nearest server (or a particular server).</p>

3/20/2009

Page 64 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>Information to be passed to the server. This may be private to the server, as all names may be generated and used by the same server. This part of the name should be opaque to the client.</p> <p>Information to be used by the application once the object has been retrieved. This part is private to the application (or, more strictly, the data format) and so cannot be defined here.” App. D to the ‘314 Patent at 6-7.</p> <p>“This section describes the syntax for. ‘Uniform resource Locators’ (URLs) : that is, basically physical addresses of objects which are retrievable using protocols already deployed on the net. The generic syntax provides a framework for new schemes for names to be resolved using as yet undefined protocols.</p> <p>The syntax is described in two parts. Firstly, we give the syntax rules of a completely specified name; secondly, we give the rules under which parts of the name may be omitted in a well-defined context.</p> <p>Full form A complete URL consists of a naming scheme specifier followed by a string whose format is a function of the naming scheme. For locators of information on the internet, a common syntax is used for the IP address part. A BNF description of the URL syntax is given in an a later section. The components are as follows.</p> <p>This represents a part of, fragment of, or a sub-function</p>

3/20/2009

Page 65 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>within, an object or object. Its syntax and semantics are defined by the application responsible for the object, or the specification of the content type of the object. The only definition here is of the allowed characters by which it may be represented in a URL.</p> <p>The fragment-id follows the URL of the whole object from which it is separated by a hash sign (# I . If the fragment-id is void, the hash sign may be omitted: A void fragment-id with or without the hash sign means that the URL refers to the whole object .</p> <p>While this hook is allowed for identification of fragments, the question of addressing of parts of objects, or of the grouping of objects and relationship between contained and containing objects, is not addressed by this object.</p> <p>This object does not address the question of objects which are different versions of a "living" object, nor of expressing the relationships between different versions and the living object .</p> <p>Scheme</p> <p>Within the URL of a object, the first element is the name of the scheme, separated from the rest of the object by a colon. The rest of the URL follows the colon in a format depending on the scheme.</p> <p>Internet protocol parts</p> <p>Those schemes which refer to internet protocols have a common syntax for the rest of the object name. This starts with a double slash "/" to indicate its presence, and continues until the following slash // or /. Within that section are</p>

3/20/2009

Page 66 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>- An optional user name, if this must be quoted to the server, followed by a commercial at sign "@"I1. (Use of this field is discouraged. Provision of encoding a password after the user name, delimited by a colon, could be made but obviously is only useful when the password is public, in which case it should not be necessary, so that is also discouraged .)</p> <p>- The internet domain name of the host in RFC1037 format (or, optionally and less advisably, the IP address as a set of four decimal digits)</p> <p>- The port number, if it is not the default number for the protocol, is given in decimal notation after a colon.</p> <p>Path - The rest of the locator is known as the 'path.' It may define details of how the client should communicate with the server, including information to be passed transparently to the server without any processing by the client. The path is interpreted in a manner dependent on the protocol being used. However, when it contains slashes, these must imply a hierarchical structure." App. D to '314 Patent, p. 8-9 (emphasis added).</p> <p>"With reference now to FIG. 4, a user can request display of a "smart statement" that lists purchase transactions for a given month (step 128). When the buyer computer receives such a request, it sends a smart statement URL to the payment computer (step 130).</p> <p>When the payment computer receives the smart statement URL, it</p>

3/20/2009

Page 67 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>verifies whether the smart statement URL authenticator was created from the contents of the smart statement URL using a cryptographic key (step 132). If not, the payment computer sends a document to the buyer computer indicating that access is denied (step 134). Otherwise, the payment computer checks to determine whether the buyer network address in the smart statement URL matches the buyer computer's actual network address (step 136). If not, the payment computer sends a document to the buyer computer indicating that access is denied (step 138). Otherwise (step 140), the payment computer and buyer computer perform a set of steps analogous to steps 64-81 in FIG. 2 (payment computer requests account name and password, user provides the requested information, and payment computer verifies the information).</p> <p>In an alternative embodiment steps 132-138 are omitted.</p> <p>After verification of account information is complete, the payment computer retrieves the requested settlement data from the settlement database, creates a smart statement document for the buyer, and sends the smart statement document to the buyer computer (step 142). An example of a smart statement document is shown in FIG. 11. Each purchase transaction record in the smart statement document includes the data of the transaction, the name of the merchant, an identification of the product, and the payment amount for the product. The smart statement document also includes a transaction detail URL for each purchase transaction (these URLs, or hypertext links, are discussed below and are not shown in FIG. 11). The smart statement document also identifies previous statements that the user may wish to have displayed. The buyer computer displays the retrieved document (step 144), and the user may request transaction details for a particular transaction listed on the smart statement (step 146). If so, the buyer</p>

Claim Element(s)	Defendants' Construction	Support for Construction
		computer sends a transaction detail URL (or "payment detail URL") to the payment computer (step 148). The transaction detail URL includes a transaction identifier, a buyer network address, and a transaction detail URL authenticator. When the payment computer receives the transaction detail URL, it performs (step 150) a set of steps analogous to steps 132-140 (verification of URL authenticator, buyer network address, and account information). The payment computer then retrieves from the settlement database data corresponding to the payment transaction specified in the transaction detail URL, creates a transaction detail document, and sends it to the buyer computer (step 152).' 492 Patent at 8:32-9:19 (emphasis added). '492 Patent, Fig. 4A.
Claim 1 and Its Dependent Claims of The '639 Patent		
1. A method of processing service requests from a client to a server system through a network, said method comprising the steps of forwarding a service request from the client to the server system, wherein communications between the client and server system are according to hypertext transfer protocol; returning		

3/20/2009

Page 69 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
a session identifier from the server system to the client, the client storing the session identifier		
for use in subsequent distinct requests to the server system; and appending the stored session identifier to each of the subsequent distinct requests from the client to the server system.	<p>the stored session identifier-</p> <p>a session identifier that is recorded in computer storage without other information, excluding standard browser formats common to the Web on or before June 7, 1995.</p> <p>the subsequent distinct requests -</p> <p>every request for a separate and different service</p>	<p>IBM Dictionary of Computing, Tenth ed. (Aug. 1993).</p> <p>Webster's Ninth New Collegiate Dictionary (1987).</p> <p>"In another embodiment, a server access control may be maintained by programming the client browser to store an SID or a similar tag for use in each URL call to that particular server. This embodiment, however, requires a special browser which can handle such communications and was generally not suitable for early browser formats common to the Web. However, it may now be implemented in cookie compatible browsers." 4:23-29 (emphasis added.)</p> <p>"[i]n another embodiment, a server access control may be maintained by programming the client browser to store an SID or a similar tag for use in each URL call to that particular server. This embodiment, however, requires a special browser which can handle such communications and is generally not suitable for the standard browser format common to the Web." US 5,708,780 at 4:25-31 (emphasis added.)</p> <p>"Applicants' invention uses a "session identifier" or SID to provide a "session" of communications between a client system and a server system in a "stateless" session environment. An SID containing enough information to support a session is appended to the initial and subsequent requests. This information can include, for example, an authorization identifier, a user identifier, an accessible domain, a key identifier, an</p>

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>expiration time, a date, the address of the user computer, and/or an unforgeable digital signature "such as a cryptographic hash of all of the other items in the SID encrypted with a secret key." Specification as filed, page 6, lines 16-21. The present invention is particularly suited to restricting access to server sites on the World Wide Web.</p> <p>A user's user name and password is verified once, at the beginning of a session, and a SID is created upon verification.</p> <p style="text-align: center;">* * *</p> <p>Upon receiving the SID from the server system, the client browser stores the SID. The client browser then appends the stored SID to each subsequent request to that server system. Because just the SID (and not the entire request) is stored, and because the SID is appended to subsequent requests to the particular server, use of the SID is not limited merely to a particular request but rather can extend to all subsequent requests to the server system, thus providing the sense of a session between the client and the server system.</p> <p style="text-align: center;">* * *</p> <p>The special URL [of Freeman-Benson] does not provide the sense of a session. For example, the special URL can be shared by others, or stored in a hotlist for later use, providing access to a particular document until the password is changed, at which time the special URL is no longer valid. Freeman-Benson, para. 12, page 3. Furthermore, the special URL will again be valid if the password is changed back. Freeman-Benson, footnote 1, page 5.</p>

3/20/2009

Page 71 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>By storing the special URL, for example, in a hotlist, Freeman-Benson stores a particular request, complete with URL, user name and password. Such a mechanism can provide automatic validation for the particular request, but cannot easily be extended to other requests to the same server using different URLs. Should the user make a different request to the same server, the user must again be prompted for user name and password. In other words, Freeman-Benson does not teach a client that stores some entity, e.g., a SID or other tag, that is appended to subsequent distinct requests to a particular server.</p> <p style="text-align: center;">* * *</p> <p>Initially, the client [in Johnson] sends a "request for service" which includes authorization information. The server builds a credentials record in response to the request, and returns to the client a credentials identifier associated with the newly created credentials record. When the client presents the credentials identifier in subsequent requests, the server uses the credentials identifier to retrieve the credentials record, and from the credentials record validates the request. Access rights are stored on the server itself, in the credentials record, and are not included in the credentials identifier. See, for example, Johnson, column 5, lines 50-65.</p> <p style="text-align: center;">* * *</p> <p>For example, Freeman-Benson teaches a "specialized URL" containing an access key which is simply an encrypted login name and password. Furthermore, Freeman-Benson teaches storing the specialized URL, that is, the request (the normal URL) along with the access key. Thus, later use of this stored specialized URL will result in a repetition of the original request, without requiring further authorization. Freeman-Benson does not append the specialized URL to subsequent requests - doing so would result in a meaningless request: one URL appended by another URL.</p>

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>Applicants' invention, on the other hand, stores the SID and appends the stored SID to each URL or request to the particular server that provided the SID, thus defining a session. That is, subsequent requests to the server from the browser do not require the user to enter additional verification information, even for different requests, because the SID which accompanies each request provides validation.</p> <p>In addition, Freeman-Benson, at the time of its publication, worked with "all existing WWW browsers." Freeman-Benson, paragraph 26, page 5, original emphasis. Such browsers as existed at that time would not support Applicants' claimed invention, which, as of the priority date, required a modified browser. See Specification as filed, page 8, lines 15-19. Of course, "modern" browsers which support cookies are such "modified" browsers." Amendments and Remarks with Request for Continued Examination – December 28, 2001 (emphasis added.)</p> <p>“With this response Applicants supplement their evidence of reduction to practice prior to the effective date of the Kahan reference. The present application is a continuation of U.S. Patent application, serial number 08/474,096 which subsequently issued as U.S. patent number 5,708,780 (the '780 patent). The entire teaching of the parent specification was incorporated by reference into the continuation application. The specification of the '780 patent includes computer code embodying the invention.</p> <p style="text-align: center;">* * *</p> <p>Later, on the page that spans columns 53-54 the TICKET_INTERTLOCALSID function performs the step of appending the stored session identifier to each subsequent distinct request from the client to the server.” Response To Office Action,</p>

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>August 31, 2004 (emphasis added.)</p> <p>“Schedule 1 describes ‘<i>the client storing the session identifier for use in subsequent distinct requests to the server system,</i>’ such as on page 5 of Schedule 1 (emphasis added):</p> <p style="padding-left: 40px;"> Server to Client: ===== HTTP/1.0 401 Unauthorized Content-type: text/html WWW-Authenticate: Basic+ encoded_string </p> <p style="padding-left: 40px;">HTML text to be displayed when the browser can't handle it, or when the user clicks on "do not retry authentication"</p> <p style="padding-left: 40px;"> ===== Where "encoded_string" is the RFC 1421 encoding of challenge:stuff_for_convenience_of_server </p> <p style="padding-left: 40px;"> Client back to Server: ===== Authorization: Basic+ encoded_string ===== </p> <p style="padding-left: 40px;">Where encoded_string is the RFC 1421 encoding of username:response:stuff_for_convenience_of_server</p> <p style="padding-left: 40px;"> In this system, the "stuff_for_convenience_of_server" is simply a place to stash the "state" of the transaction, so the server doesn't necessarily need a database. We use this for a digital signature of the expected response. </p> <p>This passage from Schedule I describes the server providing to the client transaction state information (i.e. "stuff_for_convenience_of_server"). The client receives this information from the server (i.e., "Server to Client") and stores it so that when the client needs to provide a response to the server (i.e., "Client back to Server"), the client can</p>

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>locate the "stuff_for_convenience_of_server" and provide this transaction state information back to the server along wit the response. As mentioned in this passage, the advantage of this approach is that the server is not required to use a database to store the state of the transaction.</p> <p>Schedule I describes <i>"appending the stored session identifier to each of the subsequent distinct requests from the client to the server system,"</i> such as on page 5 of Schedule 1 (emphasis added):</p> <p>Server to Client: =====</p> <p>HTTP/1.0 401 Unauthorized Content-type: text/html WWW-Authenticate: Basic+ encoded_string</p> <p>HTML text to be displayed when the browser can't handle it, or when the user clicks on "do not retry authentication"</p> <p>=====</p> <p>Where "encoded_string" is the RFC 1421 encoding of challenge:stuff_for_convenience_of_server</p> <p>Client back to Server: =====</p> <p>Authorization: Basic+ encoded_string =====</p> <p>Where encoded_string is the RFC 1421 encoding of username:response:stuff_for_convenience_of_server</p> <p>In this system, the "stuff_for_convenience_of_server" is simply a place to stash the "state" of the transaction, so the server doesn't necessarily need a database. We use this for a digital signature of the expected response.</p> <p>This passage from Schedule I describes that for a response from a "Client</p>

Claim Element(s)	Defendants' Construction	Support for Construction
		back to Server", the client provides the "encoded-string" to the server. The "encoded string" contains not only the username and the response, but coupled thereto is the "stuff_for_convenience_of_server" which contains the state information. If any subsequent response does not contain such information , then the subsequent transaction request would fail since the request would not contain the proper authorization information. Accordingly as shown by the above, Schedule 1 shows conception of claim 3 before the effective date and thus the Kahan reference should be removed as a reference." Declaration of Prior Invention at 5-7, October 19, 2006 (emphasis added.)
10. A method as claimed in claim 1 wherein the server system assigns the session identifier to an initial service request to the server system.	initial service request - the first request for service	Webster's Ninth New Collegiate Dictionary (1987). "The present invention relates to methods of processing service requests from a client to a server through a network. In particular the present invention is applicable to processing client requests in an HTTP (Hypertext Transfer Protocol) environment, such as the World-Wide Web (Web). One aspect of the invention involves forwarding a service request from the client to the server and appending a session identification (SID) to the request and to subsequent service requests from the client to the server within a session of requests. In a preferred embodiment, the present method involves returning the SID from the server to the client upon an initial service request made by the client. A valid SID may include an authorization identifier to allow a user to access controlled files. In a preferred embodiment, a client request is made with a Uniform Resource Locator (URL) from a Web browser. Where a client request is directed to a controlled file without an SID, the Internet server subjects the client to an authorization routine prior to issuing the SID, the SID being protected from forgery. A content server initiates the authorization routine by redirecting the client's request to an authentication server which may be at a different host.

3/20/2009

Page 76 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>Upon receiving a redirected request, the authentication server returns a response to interrogate the client and then issues an SID to a qualified client. For a new client, the authentication server may open a new account and issue an SID thereafter. A valid SID typically comprises a user identifier, an accessible domain, a key identifier, an expiration time such as date, the IP address of the user computer, and an unforgeable digital signature such as a cryptographic hash of all of the other items in the SID encrypted with a secret key. The authentication server then forwards a new request consisting of the original URL appended by the SID to the client in a REDIRECT. The modified request formed by a new URL is automatically forwarded by the client browser to the content server.” 3: 6-41 (emphasis added)</p> <p>“If the request is directed to a controlled page, the content server determines whether the URL contains an SID 102. For example, a URL may be directed to a controlled page name "report", such as "http://content.com/report", that requires an SID. If no SID is present, as in this example, the content server sends a "REDIRECT" response 122 to the browser 100 to redirect the user's initial request to an authentication server 200 to obtain a valid SID. The details of the authentication process are described in FIG. 2B and will be discussed later, but the result of the process is an SID provided from the authentication server to the client. In the above example, a modified URL appended with an SID may be: "http://content.com/[SID]/report". The preferred SID is a sixteen character ASCII string that encodes 96 bits of SID data, 6 bits per character. It contains a 32-bit digital signature, a 16-bit expiration date with a granularity of one hour, a 2-bit key identifier used for key management, an 8-bit domain comprising a set of information files to which the current SID authorizes access, and a 22-bit user identifier. The remaining bits are reserved for expansion. The digital signature is a</p>

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>cryptographic hash of the remaining items in the SID and the authorized IP address which are encrypted with a secret key which is shared by the authentication and content servers. If the initial GET URL contains a SID, the content server determines whether the request is directed to a page within the current domain 106. If the request having a SID is directed to a controlled page of a different domain, the SID is no longer valid and, again, the user is redirected to the authentication server 122. If the request is for a controlled page within the current domain, the content server proceeds to log the request URL, tagged with SID, and the user IP address in the transaction log 108. The content server then validates the SID 110.” 5: 42-6:8 (emphasis added.)</p> <p>‘639 Patent, FIGS 2A-3.</p>
<p>47. The method of claim 1, wherein the session identifier is designated by the server system, furthers comprising the steps of: validating, at the server system, the appended session identifier; and</p>	<p>validating, at the server system, the appended session identifier -</p> <p>checking that the session identifier is valid without resort to information stored elsewhere, such as in the server system</p>	<p>“...Such validation may include, for example, the following checks: (1) the SID's digital signature is compared against the digital signature computed from the remaining items in the SID and the user IP address using the secret key shared by the authentication and content servers; (2) the domain field of the SID is checked to verify that it is within the domain authorized; and (3) the EXP field of the SID is checked to verify that it is later than the current time. Specification as filed, page 12, lines 5-13.</p> <p>In one embodiment, for example, "a valid SID allows the client to access all controlled files within a protection domain without requiring further authorization." Specification as filed, page 7, lines 1-3. That is, information regarding access rights is fully contained within the SID, and need not be reentered by a user attempting to access any file within a domain for which the user's authorization has already been verified.</p>

3/20/2009

Page 78 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p style="text-align: center;">* * *</p> <p>Johnson does not teach or suggest a session identifier but rather teaches a credentials identifier. A credentials identifier is a "small value" used to access a "credentials structure" which is maintained on the server. See Johnson, column 5, lines 54-65. Each time a request is made, the server reconstructs "an image of the user." Johnson, column 5, lines 40-42. Johnson uses the credentials identifier to locate the credentials structure from which the image of the user is reconstructed.</p> <p>Applicants' invention, on the other hand, does not need to perform this reconstruction, because the session identifier itself contains sufficient information to validate that the request is authorized.</p> <p>*****</p> <p>For example, Freeman-Benson teaches a "specialized URL" containing an access key which is simply an encrypted login name and password. Furthermore, Freeman-Benson teaches storing the specialized URL, that is, the request (the normal URL) along with the access key. Thus, later use of this stored specialized URL will result in a repetition of the original request, without requiring further authorization. Freeman-Benson does not append the specialized URL to subsequent requests - doing so would result in a meaningless request: one URL appended by another URL.</p> <p>Applicants' invention, on the other hand, stores the SID and appends the stored SID to each URL or request to the particular server that provided the SID, thus defining a session. That is, subsequent requests to the server from the browser do not require the user to enter additional verification information, even for different requests, because the SID</p>

3/20/2009

Page 79 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>which accompanies each request provides validation.” Amendments and Remarks with Request for Continued Examination, December 28, 2001 (emphasis added)</p> <p>“Schedule 1 describes <i>"validating the session identifier appended to the service request,"</i> such as on page 2 of Schedule 1:</p> <p>The Access URL is presented by the client to the server which contains the document purchased. This "content server" validates the access URL, and if it is valid, returns the document to the client.</p> <p>As shown by this passage from Schedule 1, the access information is validated by the content server.</p> <p>Schedule 1 describes <i>"servicing the service request if the appended session identifier is valid,"</i> such as on page 5 of Schedule 1:</p> <p>Client back to Server: =====</p> <p>Authorization: Basic+ encoded_string =====</p> <p>Where encoded_string is the RFC 1421 encoding of username:response:stuff_for_convenience_of_server</p> <p>In this system, the "stuff_for_convenience_of_server" is simply a place to stash the "state" of the transaction, so the server doesn't necessarily need a database. We use this for a digital signature of the expected response.</p> <p>This passage from Schedule I describes the client providing a response</p>

3/20/2009

Page 80 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>(i.e., "Client back to Server") to the server that includes the "stuff_for_convenience_of_server" (i.e., the "state" of the transaction). As indicated in this passage, the server checks to see if the session identifier has been forged or tampered with by using "this for a digital signature of the expected response." If the digital signature is validated, then the service request (e.g., a document) is serviced, such as shown on page 2 of Schedule 1:</p> <p>The Access URL is presented by the client to the server which contains the document purchased. This "content server" validates the access URL, and if it is valid, returns the document to the client." Declaration of Prior Invention at 5-7, October 19, 2006 (emphasis added.)</p> <p>"User Identification and Validation : ... (2) a system action that identifies and verifies a user at logon or when a batch job is received for processing.</p> <p>Validation: the checking of data for correctness or for compliance with applicable standards, rules, and conventions." IBM Dictionary of Computing, Tenth ed. (Aug. 1993) (emphasis added.)</p> <p>"Validation : b: to confirm the validity of." Merriam-Webster Dictionary</p>
returning a controlled document if the appended session identifier is valid.	controlled document - a document for which authentication is required	<p>"Internet server access control and monitoring systems Abstract</p> <p>This invention relates to methods for controlling and monitoring access to network servers. In particular, the process described in the invention includes client-server sessions over the Internet. In this environment, when the user attempts to access an access-controlled file, the server</p>

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>subjects the request to a secondary server which determines whether the client has an authorization or valid account. Upon such verification, the user is provided with a session identification which allows the user to access to the requested file as well as any other files within the present protection domain.” Abstract of ‘639 Patent (emphasis added.)</p> <p>“FIG. 2A is a flowchart detailing the preferred process of the present invention and FIG. 4 illustrates a sample Web page displayed at a client by a browser. The page includes text 404 which includes underlined link text 412. The title bar 408 and URL bar 402 display the title and URL of the current web page, respectively. As shown in FIG. 4, the title of the page is "Content Home Page" and the corresponding URL is "http://content.com/homepage". When a cursor 414 is positioned over link text 412b, the page which would be retrieved by clicking a mouse is typically identified in a status bar 406 which shows the URL for that link. In this example the status bar 406 shows that the URL for the pointed link 412b is directed to a page called "advertisement" in a commercial content server called "content". By clicking on the link text, the user causes the browser to generate a URL GET request at 100 in FIG. 2A. The browser forwards the request to a content server 120, which processes the request by first determining whether the requested page is a controlled document 102. If the request is directed to an uncontrolled page, as in "advertisement" page in this example, the content server records the URL and the IP address, to the extent it is available, in the transaction log 114. The content server then sends the requested page to the browser 116 for display on the user computer 117. If the request is directed to a controlled page, the content server determines whether the URL contains an SID 102. For example, a URL may be directed to a controlled page name "report", such as "http://content.com/report", that requires an SID. If no SID is present, as in this example, the content server sends a "REDIRECT"</p>

3/20/2009

Page 82 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>response 122 to the browser 100 to redirect the user's initial request to an authentication server 200 to obtain a valid SID. The details of the authentication process are described in FIG. 2B and will be discussed later, but the result of the process is an SID provided from the authentication server to the client. In the above example, a modified URL appended with an SID may be: "http://content.com/[SID]/report". The preferred SID is a sixteen character ASCII string that encodes 96 bits of SID data, 6 bits per character. It contains a 32-bit digital signature, a 16-bit expiration date with a granularity of one hour, a 2-bit key identifier used for key management, an 8-bit domain comprising a set of information files to which the current SID authorizes access, and a 22-bit user identifier. The remaining bits are reserved for expansion. The digital signature is a cryptographic hash of the remaining items in the SID and the authorized IP address which are encrypted with a secret key which is shared by the authentication and content servers." 5:18-65 (emphasis added.)</p> <p>"FIG. 3, illustrates a typical client-server exchange involving the access control and monitoring method of the present invention. In Step 1, the client 50 running a browser transmits a GET request through a network for an uncontrolled page (UCP). For example, the user may request an advertisement page by transmitting a URL "http://content.com/advertisement", where "content.com" is the server name and "advertisement" is the uncontrolled page name. In Step 2, the content server 52 processes the GET request and transmits the requested page, "advertisement". The content server also logs the GET request in the transaction database 56 by recording the URL, the client IP address, and the current time. In Step 3, the user on the client machine may elect to traverse a link in the advertisement page directed to a controlled page (CP). For example, the advertisement page may contain a link to a controlled page called "report". Selecting this link</p>

3/20/2009

Page 83 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>causes the client browser 50 to forward a GET request through a URL which is associated with the report file "http://content.com/report". The content server 52 determines that the request is to a controlled page and that the URL does not contain an SID. In Step 4, the content server transmits a REDIRECT response to the client, and, in Step 5, the browser automatically sends the REDIRECT URL to the authentication server 54. The REDIRECT URL sent to the authentication server may contain the following string: "http://auth.com/authenticate?domain=[domain]&URL=http://content.com/repor- t" The authentication server processes the REDIRECT and determines whether user credentials (CRED) are needed for authorization. In Step 6, the authentication server transmits a "CHALLENGE" response to the client. As previously described, typical credentials consist of user name and password. An authorization header based on the credential information is then forwarded by the client browser to the authentication server. For example, a GET URL having such an authorization header is: "http://autho.com/authenticate?domain=[domain]&URL=http://content.com/rep- ort and the authorization header may be: "AUTHORIZE: [authorization]". The authentication server processes the GET request by checking the Account Database 58. If a valid account exists for the user, an SID is issued which authorizes access to the controlled page "report" and all the other pages within the domain." 7:22-67 (emphasis added.)</p> <p>"As previously described, the preferred SID comprises a compact ASCII string that encodes a user identifier, the current domain, a key identifier, an expiration time, the client IP address, and an unforgeable digital signature. In Step 8, the authentication server redirects the client to the tagged URL, "http://content.com/[SID]/report", to the client. In Step 9, the tagged URL is automatically forwarded by the browser as a GET request to the content server. The content server logs the GET request in</p>

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>the Transaction database 56 by recording the tagged URL, the client IP address, and the current time. In Step 10, the content server, upon validating the SID, transmits the requested controlled page "report" for display on the client browser." 8:1-23 (emphasis added.)</p> <p>"The Target URL contained in Message 3 can be an ordinary URL to an uncontrolled page, or it can be a URL that describes a controlled page. If the Target URL describes a controlled page then authentication is performed as previously described. The Target URL can also describe a URL that includes an SID that provides a preauthorized means of accessing a controlled page." 9: 52-58 (emphasis added.)</p> <p>"In another aspect of the invention, the user may gain access to domain of servers containing journals or publications through a subscription. In such a situation, the user may purchase the subscription in advance to gain access to on-line documents through the Internet. The user gains access to a subscribed document over the Internet through the authorization procedure as described above where an authorization indicator is preferably embedded in a session identifier. In another embodiment, rather than relying on a prepaid subscription, a user may be charged and billed each time he or she accesses a particular document through the Internet. In that case, authorization may not be required so long as the user is fully identified in order to be charged for the service. The user identification is most appropriately embedded in the session identifier described above." '639 Patent at 8:59 -9:6 (emphasis added.)</p> <p>FIGS 2A-3 of the '639 Patent.</p>
60. The method of claim 1, wherein at least one service request comprises a	a purchase request - a service request including a	"The above-mentioned patent application also describes an alternative implementation of the network sales system in which, when the user requests purchase of an advertised product, the buyer computer sends a

3/20/2009

Page 85 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
<p>purchase request, the purchase request including an associated user identifier, the method further comprising: accessing, upon receipt of the purchase request at the server system, user information associated with the user identifier sufficient to charge to an account associated with the user, the purchase price of the product identified by the purchase request; charging the user for the product identified by the purchase request according to the user information; and fulfilling the purchase request based on the user information.</p>	<p>user identifier by which a buyer initiates a payment transaction for product(s) the buyer wishes to purchase.</p>	<p>payment order directly to the payment computer, which sends an authorization message back to the buyer computer that includes an unforgeable certificate that the payment order is valid. The buyer computer then constructs a purchase message that includes the unforgeable certificate and sends it to the merchant computer. When the merchant computer receives the purchase request it sends the product to the buyer computer, based upon the pre-authorized payment order." '314 Patent at 1:36-47 (emphasis added.)</p> <p>"Additionally, the server may, at any given time, track access history within a client-server session. Such a history profile informs the service provider about link traversal frequencies and link paths followed by users. This profile is produced by filtering transaction logs from one or more servers to select only transactions involving a particular user ID (UID). Two subsequent entries, A and B, corresponding to requests from a given user in these logs represent a link traversal from document A to document B made by the user in question. This information may be used to identify the most popular links to a specific page and to suggest where to insert new links to provide more direct access. In another embodiment, the access history is evaluated to determine traversed links leading to a purchase of a product made within commercial pages. This information may be used, for example, to charge for advertising based on the number of link traversals from an advertising page to a product page or based on the count of purchases resulting from a path including the advertisement. In this embodiment, the server can gauge the effectiveness of advertising by measuring the number of sales that resulted from a particular page, link, or path of links. The system can be configured to charge the merchant for an advertising page based on the number of sales that resulted from that page." '639 Patent at 8:27-50 (emphasis added.)</p>

3/20/2009

Page 86 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>“In another aspect of the invention, the user may gain access to domain of servers containing journals or publications through a subscription. In such a situation, the user may purchase the subscription in advance to gain access to on-line documents through the Internet. The user gains access to a subscribed document over the Internet through the authorization procedure as described above where an authorization indicator is preferably embedded in a session identifier. In another embodiment, rather than relying on a prepaid subscription, a user may be charged and billed each time he or she accesses a particular document through the Internet. In that case, authorization may not be required so long as the user is fully identified in order to be charged for the service. The user identification is most appropriately embedded in the session identifier described above.” ‘639 Patent at 8:59 -9:6 (emphasis added.)</p>
<p>62. The method of claim 1, further comprising: under control of a client system, displaying information identifying a product; and in response to a user selection of a hyperlink associated with a product desired to be purchased,</p>	<p>hyperlink - a navigational element pointing, for example, to another document, or form, or resource</p>	<p>“The hypertext conventions and related functions of the world wide web are described in the appendices of U.S. patent application Ser. No. 08/328,133, filed on Oct. 24, 1994, by Payne et al. which is incorporated herein by reference.” ‘639 patent at 2:9-14 (emphasis added.)</p> <p>“ The term ‘URL’ as used the present application is an example of a ‘link,’ which is a pointer to another document or form (including multimedia documents, hypertext documents including other links, or audio/video documents)” ‘314 Patent at 9:59-63 (emphasis added.)</p> <p>“Each Web page may contain pictures and sounds in addition to text. Hidden behind certain text, pictures or sounds are connections, known as ‘hypertext links’ (‘links’), to other pages within the same server or even on other computers within the Internet. For example, links may be visually displayed as words or phrases that may be underlined or displayed in a second color. Each link is directed to a web page by using</p>

3/20/2009

Page 87 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>a special name called a URL (Uniform Resource Locator). URLs enable a Web browser to go directly to any file held on any Web server. A user may also specify a known URL by writing it directly into the command line on a Web page to jump to another Web page.” ‘639 Patent at 2:15-26 (emphasis added.)</p> <p>“What Is Hypertext?</p> <p>Hypertext offers a way of moving from one document to another through word links. Each marked word in a document has a link to another document or resource. This allows you to follow various paths within the system based on the contents of each document in a nonlinear fashion, according to subject. For example, when a word or concept is introduced in one document, you can move to another document that may simply be a definition or explanation of the term, or even a long document about that subject. The reader can open the second document, read it, and then return to the original, or move on to other documents based on the marked words in each new document. Hypermedia works much like hypertext, but allows words in a document to be linked to nontext files of images, sounds, QuickTime movies, and so on.” The Internet Business Book - produced at CNZ0012914. <i>See, e.g.</i>, CNZ 13130.</p> <p>“The operation of the Web relies on hypertext as its means of interacting with users. Hypertext is basically the same as regular text - it can be stored, read, searched, or edited - with an important exception: hypertext contains connections within the text to other documents.</p> <p>For instance, suppose you were able to somehow select (with a mouse or with your finger) the word "hypertext" in the sentence before this one. In a hypertext system, you would then have one or more documents related to hypertext appear before you - a history of hypertext, for</p>

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>example, or the Webster's definition of hypertext. These new texts would themselves have links and connections to other documents - continually selecting text would take you on a free- associative tour of information. In this way, hypertext links, called hyperlinks, can create a complex virtual web of connections.</p> <p>Hypermedia is hypertext with a difference - hypermedia documents contain links not only to other pieces of text, but also to other forms of media - sounds, images, and movies. Images themselves can be selected to link to sounds or documents. Here are some simple examples of hypermedia:</p> <p>You are reading a text on the Hawaiian language. You select a Hawaiian phrase, then hear the phrase as spoken in the native tongue.</p> <p>You are a law student studying the Hawaii Revised Statutes. By selecting a passage, you find precedents from a 1920 Supreme Court ruling stored at Cornell. Cross-referenced hyperlinks allow you to view any one of 520 related cases with audio annotations.</p> <p>Looking at a company's floorplan, you are able to select an office by touching a room. The employee's name and picture appears with a list of their current projects.</p> <p>You are a scientist doing work on the cooling of steel springs. By selecting text in a research paper, you are able to view a computer-generated movie of a cooling spring. By selecting a button you are able to receive a program which will perform thermodynamic calculations.</p> <p>A student reading a digital version of an art magazine can select a work to print or display in full. If the piece is a sculpture, she can request to</p>

3/20/2009

Page 89 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>see a movie of the sculpture rotating. By interactively controlling the movie, she can zoom in to see more detail.</p> <p>The Web, although still in its early years, allows many of these examples to work in real life. It facilitates the easy exchange of hypermedia through networked environments from anything as small as two Macintoshes connected together to something as large as the global Internet.” Entering the World-Wide Web: A Guide to Cyberspace , produced at CNZ0013886. <i>See, e.g.</i>, CNZ 13887.</p> <p>“What are hypertext and hypermedia? ...</p> <p>The documents that the browsers display are hypertext documents. Hypertext is text with pointers to other text. The browsers let you deal with the pointers in a transparent way - you clicking on a part of the text, and you are presented with the text that is pointed to.</p> <p>Hypermedia is a superset of hypertext -- it is any medium with pointers to other media. This means that browsers might not display a text file, but might display images or sound or animations.” WWW FAQ v. 0.1, <i>see</i> CNZ0014216.</p> <p>“Hyper-:</p> <p>This prefix has a dictionary meaning of above, excessive or beyond. Its use in computing, as exemplified below, is perhaps related to analogous jargon or buzzwords coined by the science fiction community, e.g. hyperspace, a speculative extra physical dimension. The hyper prefix now has a strong historical momentum, and seems likely to endure. However, with hindsight other prefixes such as meta-(among, about or between), or inter- might have been more</p>

3/20/2009

Page 90 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>accurate descriptors of the structural emphasis of hypermedia; the 'hyper-level' is strictly at a meta-level to the semantic or content level. (It may be interesting to note that in the meantime, metatext has become a favourite term of the Structuralist schools of literary criticism, and Intermedia is the proprietary name of an advanced hypermedia system.)</p> <p>Hypermedia :</p> <p>Taken to be a generic approach to constructing non-linear, computer-supported materials, as embodied by a number of commercial and academic program shells; the term is also used to describe the materials themselves. Hypermedia itself is a subset of the more general class of interactive multimedia -- not all implementations of which support 'hyper' functionality. The term hypermedia will be used throughout this book unless the context is uniquely text-based, in which case hypertext will be preferred.</p> <p>Hypermedia is used here as a singular noun, as per the accepted contemporary use of the strictly plural noun data.</p> <p>Hypertext:</p> <p>Hypertext, and hypertext programs are a subset of hypermedia and hypermedia programs (albeit the largest, most central, and probably the most commercially significant, see Figure 1.1). Ted Nelson claims to have originally coined the term hypertext (meaning writing with and for the computer) in the early 1960s." Hypertext and Hypermedia, <i>see e.g.</i>, CNZ 15885-15887.</p> <p>"Hot spots Meanwhile, several programs have been made exploring these ideas,</p>

3/20/2009

Page 91 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>both commercially and academically. Most of them use "hot spots" in documents, like icons, or highlighted phrases, as sensitive areas, touching a hot spot with a mouse brings up the relevant information, or expands the text on the screen to include it. Imagine, then, the references in this document, all being associated with the network address of the thing to which they referred, so that while reading this document you could skip to them with a click of the mouse.</p> <p>"Hypertext" is a term coined in the 1950s by Ted Nelson [...], which has become popular for these systems, although it is used to embrace two different ideas. One idea (which is relevant to this problem) is the concept: "Hypertext": Human- readable information linked together in an unconstrained way.</p> <p>The other idea, which is independent and largely a question of technology and time, is of multimedia documents which include graphics, speech and video. I will not discuss this latter aspect further here, although I will use the word "Hypermedia" to indicate that one is not bound to text." Information Management: A Proposal, <i>see</i> CNZ0021631.</p> <p>“2 / Concepts of Hypertext and Hypermedia</p> <p style="text-align: center;">Hypertext and Hypermedia- Definition and History</p> <p>What does this rainy-night tale have to do with hypertext and hypermedia? Everything. The essential distinction of both hypertext and hypermedia is the automation of the linking process that Nancy and I went through, first to find General Buford and then to investigate the other points that interested us.</p>

3/20/2009

Page 92 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>Hyper-definitions</p> <p>Hypertext is the use of a computer to automate the links and follow their paths through chunks of text information until the user is satisfied (figures 1.1 and 1.2). The essence of hypermedia is the analogous computerized linkage of and navigation through chunks of information in several different media (known as multimedia information). Non-text information might be two- or three-dimensional graphic images, animation, film, video tape, or monaural or stereo sound recordings (figure 1.3)." Hypercard, Hypertext & Hypermedia for Libraries and Media Centers, <i>see</i> CNZ0022045-22062.</p> <p>"Hypermedia - A combination of hypertext (q.v.) and multimedia (q.v.). hypertext - Documents that contain links to other documents; selecting a link automatically displays the second document." The Whole Internet, <i>see</i> CNZ0024174.</p>
<p>sending a request to purchase the item along with an identifier of a purchaser of the item to a server system; and under control of the server system, upon receiving the request, retrieving additional information previously stored for the purchaser identified by the identifier in the received request; charging the user the</p>	<p>a request to purchase -</p> <p>a service request including a user identifier in which a buyer initiates a payment transaction for product(s) the buyer wishes to purchase.</p>	<p>"The above-mentioned patent application also describes an alternative implementation of the network sales system in which, when the user requests purchase of an advertised product, the buyer computer sends a payment order directly to the payment computer, which sends an authorization message back to the buyer computer that includes an unforgeable certificate that the payment order is valid. The buyer computer then constructs a purchase message that includes the unforgeable certificate and sends it to the merchant computer. When the merchant computer receives the purchase request it sends the product to the buyer computer, based upon the pre-authorized payment order." '314 Patent at 1:36-47 (emphasis added.)</p> <p>"Additionally, the server may, at any given time, track access history</p>

3/20/2009

Page 93 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
purchase price of the product; and fulfilling the request for the product.		<p>within a client-server session. Such a history profile informs the service provider about link traversal frequencies and link paths followed by users. This profile is produced by filtering transaction logs from one or more servers to select only transactions involving a particular user ID (UID). Two subsequent entries, A and B, corresponding to requests from a given user in these logs represent a link traversal from document A to document B made by the user in question. This information may be used to identify the most popular links to a specific page and to suggest where to insert new links to provide more direct access. In another embodiment, the access history is evaluated to determine traversed links leading to a purchase of a product made within commercial pages. This information may be used, for example, to charge for advertising based on the number of link traversals from an advertising page to a product page or based on the count of purchases resulting from a path including the advertisement. In this embodiment, the server can gauge the effectiveness of advertising by measuring the number of sales that resulted from a particular page, link, or path of links. The system can be configured to charge the merchant for an advertising page based on the number of sales that resulted from that page.” ‘639 Patent at 8:27-50 (emphasis added.)</p> <p>“In another aspect of the invention, the user may gain access to domain of servers containing journals or publications through a subscription. In such a situation, the user may purchase the subscription in advance to gain access to on-line documents through the Internet. The user gains access to a subscribed document over the Internet through the authorization procedure as described above where an authorization indicator is preferably embedded in a session identifier. In another embodiment, rather than relying on a prepaid subscription, a user may be charged and billed each time he or she accesses a particular document through the Internet. In that case, authorization may not be required so</p>

Claim Element(s)	Defendants' Construction	Support for Construction
		long as the user is fully identified in order to be charged for the service. The user identification is most appropriately embedded in the session identifier described above." '639 Patent at 8:59 -9:6 (emphasis added.)
65. The method of claim 1, wherein a service request comprises a request to purchase a product.	a request to purchase - a service request including a user identifier in which a buyer initiates a payment transaction for product(s) the buyer wishes to purchase.	<p>"The above-mentioned patent application also describes an alternative implementation of the network sales system in which, when the user requests purchase of an advertised product, the buyer computer sends a payment order directly to the payment computer, which sends an authorization message back to the buyer computer that includes an unforgeable certificate that the payment order is valid. The buyer computer then constructs a purchase message that includes the unforgeable certificate and sends it to the merchant computer. When the merchant computer receives the purchase request it sends the product to the buyer computer, based upon the pre-authorized payment order." '314 Patent at 1:36-47 (emphasis added.)</p> <p>"Additionally, the server may, at any given time, track access history within a client-server session. Such a history profile informs the service provider about link traversal frequencies and link paths followed by users. This profile is produced by filtering transaction logs from one or more servers to select only transactions involving a particular user ID (UID). Two subsequent entries, A and B, corresponding to requests from a given user in these logs represent a link traversal from document A to document B made by the user in question. This information may be used to identify the most popular links to a specific page and to suggest where to insert new links to provide more direct access. In another embodiment, the access history is evaluated to determine traversed links leading to a purchase of a product made within commercial pages. This information may be used, for example, to charge for advertising based on the number of link traversals from an advertising page to a product page or based on the count of purchases resulting from</p>

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>a path including the advertisement. In this embodiment, the server can gauge the effectiveness of advertising by measuring the number of sales that resulted from a particular page, link, or path of links. The system can be configured to charge the merchant for an advertising page based on the number of sales that resulted from that page.” ‘639 Patent at 8:27-50 (emphasis added.)</p> <p>“In another aspect of the invention, the user may gain access to domain of servers containing journals or publications through a subscription. In such a situation, the user may purchase the subscription in advance to gain access to on-line documents through the Internet. The user gains access to a subscribed document over the Internet through the authorization procedure as described above where an authorization indicator is preferably embedded in a session identifier. In another embodiment, rather than relying on a prepaid subscription, a user may be charged and billed each time he or she accesses a particular document through the Internet. In that case, authorization may not be required so long as the user is fully identified in order to be charged for the service. The user identification is most appropriately embedded in the session identifier described above.” ‘639 Patent at 8:59 -9:6 (emphasis added.)</p>
Claim 78 and Its Dependent Claim of The ‘639 Patent		
78. A method of processing, in a server system, service requests from a client to the server system through a network, said method comprising the steps of: receiving, from the client, a	<p>a session identifier stored at the client -</p> <p>a session identifier that is recorded in computer storage without other information, excluding standard browser</p>	<p>IBM Dictionary of Computing, Tenth ed. (Aug. 1993).</p> <p>Webster's Ninth New Collegiate Dictionary (1987).</p> <p>“In another embodiment, a server access control may be maintained by programming the client browser to store an SID or a similar tag for use in each URL call to that particular server. This embodiment, however,</p>

Claim Element(s)	Defendants' Construction	Support for Construction
<p>service request to which has been appended by the client, wherein communications between the client and server system are according to hypertext transfer protocol;</p>	<p>formats common to the Web on or before June 7, 1995.</p>	<p>requires a special browser which can handle such communications and was generally not suitable for early browser formats common to the Web. However, it may now be implemented in cookie compatible browsers.“ 4:23-29 (emphasis added.)</p> <p>“[i]n another embodiment, a server access control may be maintained by programming the client browser to store an SID or a similar tag for use in each URL call to that particular server. This embodiment, however, requires a special browser which can handle such communications and is generally not suitable for the standard browser format common to the Web.” US 5,708,780 at 4:25-31 (emphasis added.)</p> <p>“Applicants' invention uses a "session identifier" or SID to provide a "session" of communications between a client system and a server system in a "stateless" session environment. An SID containing enough information to support a session is appended to the initial and subsequent requests. This information can include, for example, an authorization identifier, a user identifier, an accessible domain, a key identifier, an expiration time, a date, the address of the user computer, and/or an unforgeable digital signature "such as a cryptographic hash of all of the other items in the SID encrypted with a secret key." Specification as filed, page 6, lines 16-21. The present invention is particularly suited to restricting access to server sites on the World Wide Web.</p> <p>A user's user name and password is verified once, at the beginning of a session, and a SID is created upon verification.</p> <p style="text-align: center;">* * *</p> <p>Upon receiving the SID from the server system, the client browser stores</p>

3/20/2009

Page 97 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>the SID. The client browser then appends the stored SID to each subsequent request to that server system. Because just the SID (and not the entire request) is stored, and because the SID is appended to subsequent requests to the particular server, use of the SID is not limited merely to a particular request but rather can extend to all subsequent requests to the server system, thus providing the sense of a session between the client and the server system.</p> <p style="text-align: center;">* * *</p> <p>The special URL [of Freeman-Benson] does not provide the sense of a session. For example, the special URL can be shared by others, or stored in a hotlist for later use, providing access to a particular document until the password is changed, at which time the special URL is no longer valid. Freeman-Benson, para. 12, page 3. Furthermore, the special URL will again be valid if the password is changed back. Freeman-Benson, footnote 1, page 5.</p> <p>By storing the special URL, for example, in a hotlist, Freeman-Benson stores a particular request, complete with URL, user name and password. Such a mechanism can provide automatic validation for the particular request, but cannot easily be extended to other requests to the same server using different URLs. Should the user make a different request to the same server, the user must again be prompted for user name and password. In other words, Freeman-Benson does not teach a client that stores some entity, e.g., a SID or other tag, that is appended to subsequent distinct requests to a particular server.</p> <p style="text-align: center;">* * *</p> <p>Initially, the client [in Johnson] sends a "request for service" which includes authorization information. The server builds a credentials record</p>

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>in response to the request, and returns to the client a credentials identifier associated with the newly created credentials record. When the client presents the credentials identifier in subsequent requests, the server uses the credentials identifier to retrieve the credentials record, and from the credentials record validates the request. Access rights are stored on the server itself, in the credentials record, and are not included in the credentials identifier. See, for example, Johnson, column 5, lines 50-65.</p> <p style="text-align: center;">* * *</p> <p>For example, Freeman-Benson teaches a "specialized URL" containing an access key which is simply an encrypted login name and password. Furthermore, Freeman-Benson teaches storing the specialized URL, that is, the request (the normal URL) along with the access key. Thus, later use of this stored specialized URL will result in a repetition of the original request, without requiring further authorization. Freeman-Benson does not append the specialized URL to subsequent requests - doing so would result in a meaningless request: one URL appended by another URL.</p> <p>Applicants' invention, on the other hand, stores the SID and appends the stored SID to each URL or request to the particular server that provided the SID, thus defining a session. That is, subsequent requests to the server from the browser do not require the user to enter additional verification information, even for different requests, because the SID which accompanies each request provides validation.</p> <p>In addition, Freeman-Benson, at the time of its publication, worked with "all existing WWW browsers." Freeman-Benson, paragraph 26, page 5, original emphasis. Such browsers as existed at that time would not support Applicants' claimed invention, which, as of the priority date, required a modified browser. See Specification as filed, page 8, lines 15-</p>

3/20/2009

Page 99 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>19. Of course, "modern" browsers which support cookies are such "modified" browsers.” Amendments and Remarks with Request for Continued Examination – December 28, 2001 (emphasis added.)</p> <p>“With this response Applicants supplement their evidence of reduction to practice prior to the effective date of the Kahan reference. The present application is a continuation of U.S. Patent application, serial number 08/474,096 which subsequently issued as U.S. patent number 5,708,780 (the '780 patent). The entire teaching of the parent specification was incorporated by reference into the continuation application. The specification of the '780 patent includes computer code embodying the invention.</p> <p style="text-align: center;">* * *</p> <p>Later, on the page that spans columns 53-54 the TICKET_INTERTLOCALSID function performs the step of appending the stored session identifier to each subsequent distinct request from the client to the server.” Response To Office Action, August 31, 2004 (emphasis added.)</p> <p>“Schedule 1 describes ‘<i>the client storing the session identifier for use in subsequent distinct requests to the server system,</i>’ such as on page 5 of Schedule 1 (emphasis added):</p>

3/20/2009

Page 100 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>Server to Client: =====</p> <p>HTTP/1.0 401 Unauthorized Content-type: text/html WWW-Authenticate: Basic+ encoded_string</p> <p>HTML text to be displayed when the browser can't handle it, or when the user clicks on "do not retry authentication" =====</p> <p>Where "encoded_string" is the RFC 1421 encoding of challenge:stuff_for_convenience_of_server</p> <p>Client back to Server: =====</p> <p>Authorization: Basic+ encoded_string =====</p> <p>Where encoded_string is the RFC 1421 encoding of username:response:stuff_for_convenience_of_server</p> <p>In this system, the "stuff_for_convenience_of_server" is simply a place to stash the "state" of the transaction, so the server doesn't necessarily need a database. We use this for a digital signature of the expected response.</p> <p>This passage from Schedule I describes the server providing to the client transaction state information (i.e. "stuff_for_convenience_of_server"). The client receives this information from the server (i.e., "Server to Client") and stores it so that when the client needs to provide a response to the server (i.e., "Client back to Server"), the client can locate the "stuff_for_convenience_of server" and provide this transaction state information back to the server along wit the response. As mentioned in this passage, the advantage of this approach is that the server is not required to use a database to store the state of the transaction.</p> <p>Schedule I describes "<i>appending the stored session identifier to each of</i></p>

3/20/2009

Page 101 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p><i>the subsequent distinct requests from the client to the server system,"</i> such as on page 5 of Schedule 1 (emphasis added):</p> <p>Server to Client: =====</p> <p>HTTP/1.0 401 Unauthorized Content-type: text/html WWW-Authenticate: Basic+ encoded_string</p> <p>HTML text to be displayed when the browser can't handle it, or when the user clicks on "do not retry authentication"</p> <p>=====</p> <p>Where "encoded_string" is the RFC 1421 encoding of challenge:stuff_for_convenience_of_server</p> <p>Client back to Server: =====</p> <p>Authorization: Basic+ encoded_string =====</p> <p>Where encoded_string is the RFC 1421 encoding of username:response:stuff_for_convenience_of_server</p> <p>In this system, the "stuff_for_convenience_of_server" is simply a place to stash the "state" of the transaction, so the server doesn't necessarily need a database. We use this for a digital signature of the expected response.</p> <p>This passage from Schedule I describes that for a response from a "Client back to Server", the client provides the "encoded-string" to the server. The "encoded string" contains not only the username and the response, but coupled thereto is the "stuff_for_convenience_of_server" which contains the state information. If any subsequent response does not contain such information, then the subsequent transaction request would fail since the request would not contain the proper authorization information. Accordingly as shown by the above, Schedule 1 shows</p>

3/20/2009

Page 102 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		conception of claim 3 before the effective date and thus the Kahan reference should be removed as a reference." Declaration of Prior Invention at 5-7, October 19, 2006 (emphasis added.)
validating the session identifier appended to the service request ; and servicing the service request if the appended session identifier is valid.	validating the session identifier appended to the service request - checking that the session identifier is valid without resort to information stored elsewhere, such as in the server system	<p>"...Such validation may include, for example, the following checks: (1) the SID's digital signature is compared against the digital signature computed from the remaining items in the SID and the user IP address using the secret key shared by the authentication and content servers; (2) the domain field of the SID is checked to verify that it is within the domain authorized; and (3) the EXP field of the SID is checked to verify that it is later than the current time. Specification as filed, page 12, lines 5-13.</p> <p>In one embodiment, for example, "a valid SID allows the client to access all controlled files within a protection domain without requiring further authorization." Specification as filed, page 7, lines 1-3. That is, information regarding access rights is fully contained within the SID, and need not be reentered by a user attempting to access any file within a domain for which the user's authorization has already been verified.</p> <p style="text-align: center;">* * *</p> <p>Johnson does not teach or suggest a session identifier but rather teaches a credentials identifier. A credentials identifier is a "small value" used to access a "credentials structure" which is maintained on the server. See Johnson, column 5, lines 54-65. Each time a request is made, the server reconstructs "an image of the user." Johnson, column 5, lines 40-42. Johnson uses the credentials identifier to locate the credentials structure from which the image of the user is reconstructed.</p> <p>Applicants' invention, on the other hand, does not need to perform</p>

3/20/2009

Page 103 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>this reconstruction, because the session identifier itself contains sufficient information to validate that the request is authorized.</p> <p>*****</p> <p>For example, Freeman-Benson teaches a "specialized URL" containing an access key which is simply an encrypted login name and password. Furthermore, Freeman-Benson teaches storing the specialized URL, that is, the request (the normal URL) along with the access key. Thus, later use of this stored specialized URL will result in a repetition of the original request, without requiring further authorization. Freeman-Benson does not append the specialized URL to subsequent requests - doing so would result in a meaningless request: one URL appended by another URL.</p> <p>Applicants' invention, on the other hand, stores the SID and appends the stored SID to each URL or request to the particular server that provided the SID, thus defining a session. That is, subsequent requests to the server from the browser do not require the user to enter additional verification information, even for different requests, because the SID which accompanies each request provides validation." Amendments and Remarks with Request for Continued Examination, December 28, 2001 (emphasis added)</p> <p>"Schedule 1 describes <i>"validating the session identifier appended to the service request,"</i> such as on page 2 of Schedule 1:</p> <p>The Access URL is presented by the client to the server which contains the document purchased. This "content server" validates the access URL,</p>

3/20/2009

Page 104 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>and if it is valid, returns the document to the client.</p> <p>As shown by this passage from Schedule 1, the access information is validated by the content server.</p> <p>Schedule 1 describes <i>"servicing the service request if the appended session identifier is valid,"</i> such as on page 5 of Schedule 1:</p> <p><u>Client back to Server:</u></p> <p><u>Authorization: Basic+ encoded_string</u></p> <p>Where encoded_string is the RFC 1421 encoding of username:response:stuff_for_convenience_of_server</p> <p>In this system, the "stuff_for_convenience_of_server" is simply a place to stash the "state" of the transaction, so the server doesn't necessarily need a database. We use this for a digital signature of the expected response.</p> <p>This passage from Schedule I describes the client providing a response (i.e., "Client back to Server") to the server that includes the "stuff_for_convenience_of_server" (i.e., the "state" of the transaction). As indicated in this passage, the server checks to see if the session identifier has been forged or tampered with by using "this for a digital signature of the expected response." If the digital signature is validated, then the service request (e.g., a document) is serviced, such as shown on page 2 of Schedule 1:</p> <p>The Access URL is presented by the client to the server which contains the document purchased. This "content server" validates the access URL, and if it is valid, returns the document to the client." Declaration of Prior</p>

3/20/2009

Page 105 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>Invention at 5-7, October 19, 2006 (emphasis added.)</p> <p>“User Identification and Validation : ... (2) a system action that identifies and verifies a user at logon or when a batch job is received for processing.</p> <p>Validation: the checking of data for correctness or for compliance with applicable standards, rules, and conventions.” IBM Dictionary of Computing, Tenth ed. (Aug. 1993) (emphasis added.)</p> <p>“Validation : b: to confirm the validity of.” Merriam-Webster Dictionary</p>
79. The method of claim 78, further comprising, in the server system: receiving an initial service request from the client;	initial service request - the first request for service	<p>Webster's Ninth New Collegiate Dictionary (1987).</p> <p>“The present invention relates to methods of processing service requests from a client to a server through a network. In particular the present invention is applicable to processing client requests in an HTTP (Hypertext Transfer Protocol) environment, such as the World-Wide Web (Web). One aspect of the invention involves forwarding a service request from the client to the server and appending a session identification (SID) to the request and to subsequent service requests from the client to the server within a session of requests. In a preferred embodiment, the present method involves returning the SID from the server to the client upon an initial service request made by the client. A valid SID may include an authorization identifier to allow a user to access controlled files. In a preferred embodiment, a client request is made with a Uniform Resource Locator (URL) from a Web browser. Where a client request is directed to a controlled file without an SID, the Internet server subjects the client to an authorization routine prior to issuing the SID, the SID being protected from forgery. A content server initiates the authorization routine by redirecting the client's</p>

3/20/2009

Page 106 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>request to an authentication server which may be at a different host. Upon receiving a redirected request, the authentication server returns a response to interrogate the client and then issues an SID to a qualified client. For a new client, the authentication server may open a new account and issue an SID thereafter. A valid SID typically comprises a user identifier, an accessible domain, a key identifier, an expiration time such as date, the IP address of the user computer, and an unforgeable digital signature such as a cryptographic hash of all of the other items in the SID encrypted with a secret key. The authentication server then forwards a new request consisting of the original URL appended by the SID to the client in a REDIRECT. The modified request formed by a new URL is automatically forwarded by the client browser to the content server.” 3: 6-41 (emphasis added)</p> <p>“If the request is directed to a controlled page, the content server determines whether the URL contains an SID 102. For example, a URL may be directed to a controlled page name "report", such as "http://content.com/report", that requires an SID. If no SID is present, as in this example, the content server sends a "REDIRECT" response 122 to the browser 100 to redirect the user's initial request to an authentication server 200 to obtain a valid SID. The details of the authentication process are described in FIG. 2B and will be discussed later, but the result of the process is an SID provided from the authentication server to the client. In the above example, a modified URL appended with an SID may be: "http://content.com/[SID]/report". The preferred SID is a sixteen character ASCII string that encodes 96 bits of SID data, 6 bits per character. It contains a 32-bit digital signature, a 16-bit expiration date with a granularity of one hour, a 2-bit key identifier used for key management, an 8-bit domain comprising a set of information files to which the current SID authorizes access, and a 22-bit user identifier. The</p>

3/20/2009

Page 107 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>remaining bits are reserved for expansion. The digital signature is a cryptographic hash of the remaining items in the SID and the authorized IP address which are encrypted with a secret key which is shared by the authentication and content servers. If the initial GET URL contains a SID, the content server determines whether the request is directed to a page within the current domain 106. If the request having a SID is directed to a controlled page of a different domain, the SID is no longer valid and, again, the user is redirected to the authentication server 122. If the request is for a controlled page within the current domain, the content server proceeds to log the request URL, tagged with SID, and the user IP address in the transaction log 108. The content server then validates the SID 110.” 5: 42-6:8 (emphasis added.)</p> <p>‘639 Patent, FIGS 2A-3.</p>
<p>creating, responsive to the initial service request, the session identifier; and returning the session identifier to the client for storage by the client for use in subsequent distinct requests to the server system.</p>	<p>creating, responsive to the initial service request, the session identifier-</p> <p>creating, based on a type of the first request for service, the session identifier</p> <p>subsequent distinct requests-</p> <p>every request for a separate and different service</p>	<p>Webster’s Ninth New Collegiate Dictionary (1987).</p> <p>“The present invention relates to methods of processing service requests from a client to a server through a network. In particular the present invention is applicable to processing client requests in an HTTP (Hypertext Transfer Protocol) environment, such as the World-Wide Web (Web). One aspect of the invention involves forwarding a service request from the client to the server and appending a session identification (SID) to the request and to subsequent service requests from the client to the server within a session of requests. In a preferred embodiment, the present method involves returning the SID from the server to the client upon an initial service request made by the client. A valid SID may include an authorization identifier to allow a user to access controlled files. In a preferred embodiment, a client request is made with a Uniform Resource Locator (URL) from a Web browser. Where a client request is directed to a controlled file without an</p>

3/20/2009

Page 108 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>SID, the Internet server subjects the client to an authorization routine prior to issuing the SID, the SID being protected from forgery. A content server initiates the authorization routine by redirecting the client's request to an authentication server which may be at a different host. Upon receiving a redirected request, the authentication server returns a response to interrogate the client and then issues an SID to a qualified client. For a new client, the authentication server may open a new account and issue an SID thereafter. A valid SID typically comprises a user identifier, an accessible domain, a key identifier, an expiration time such as date, the IP address of the user computer, and an unforgeable digital signature such as a cryptographic hash of all of the other items in the SID encrypted with a secret key. The authentication server then forwards a new request consisting of the original URL appended by the SID to the client in a REDIRECT. The modified request formed by a new URL is automatically forwarded by the client browser to the content server.” 3: 6-41 (emphasis added)</p> <p>“FIG. 2A is a flowchart detailing the preferred process of the present invention and FIG. 4 illustrates a sample Web page displayed at a client by a browser. The page includes text 404 which includes underlined link text 412. The title bar 408 and URL bar 402 display the title and URL of the current web page, respectively. As shown in FIG. 4, the title of the page is "Content Home Page" and the corresponding URL is "http://content.com/homepage". When a cursor 414 is positioned over link text 412b, the page which would be retrieved by clicking a mouse is typically identified in a status bar 406 which shows the URL for that link. In this example the status bar 406 shows that the URL for the pointed link 412b is directed to a page called "advertisement" in a commercial content server called "content". By clicking on the link text, the user causes the browser to generate a URL GET request at 100 in FIG. 2A. The browser forwards the request to a content server 120,</p>

3/20/2009

Page 109 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>which processes the request by first determining whether the requested page is a controlled document 102. If the request is directed to an uncontrolled page, as in "advertisement" page in this example, the content server records the URL and the IP address, to the extent it is available, in the transaction log 114. The content server then sends the requested page to the browser 116 for display on the user computer 117.</p> <p>If the request is directed to a controlled page, the content server determines whether the URL contains an SID 102. For example, a URL may be directed to a controlled page name "report", such as "http://content.com/report", that requires an SID. If no SID is present, as in this example, the content server sends a "REDIRECT" response 122 to the browser 100 to redirect the user's initial request to an authentication server 200 to obtain a valid SID. The details of the authentication process are described in FIG. 2B and will be discussed later, but the result of the process is an SID provided from the authentication server to the client. In the above example, a modified URL appended with an SID may be:</p> <p>"http://content.com/[SID]/report". The preferred SID is a sixteen character ASCII string that encodes 96 bits of SID data, 6 bits per character. It contains a 32-bit digital signature, a 16-bit expiration date with a granularity of one hour, a 2-bit key identifier used for key management, an 8-bit domain comprising a set of information files to which the current SID authorizes access, and a 22-bit user identifier. The remaining bits are reserved for expansion. The digital signature is a cryptographic hash of the remaining items in the SID and the authorized IP address which are encrypted with a secret key which is shared by the authentication and content servers. If the initial GET URL contains a SID, the content server determines whether the request is directed to a page within the current domain 106. If the request having a SID is</p>

3/20/2009

Page 110 of 110

Claim Element(s)	Defendants' Construction	Support for Construction
		<p>directed to a controlled page of a different domain, the SID is no longer valid and, again, the user is redirected to the authentication server 122. If the request is for a controlled page within the current domain, the content server proceeds to log the request URL, tagged with SID, and the user IP address in the transaction log 108. The content server then validates the SID 110.” 5: 18-6:8 (emphasis added.)</p> <p>‘639 Patent, FIGS 2A-3.</p>